

## **The journal of mental science.**

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THE JOURNAL  
OF  
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**VOL. LVI.**



**LONDON:**

**J. & A. CHURCHILL,**  
**7, GREAT MARLBOROUGH STREET.**

**MDCCCX.**

"In adopting our title of the *Journal of Mental Science*, published by authority of the Medico-Psychological Association, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the term mental physiology or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid; for although we do not eschew metaphysical discussion, the aim of this JOURNAL is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our JOURNAL is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanician uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow-men may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—Sir J. C. Bucknill, M.D., F.R.S.



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 1844. Dr. Thurnam, York Retreat.  
 1847. Dr. Wintle, Warneford House, Oxford.  
 1851. Dr. Conolly, Hanwell.  
 1852. Dr. Wintle, Warneford House.

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1854. A. J. Sutherland, M.D., St. Luke's Hospital, London.  
 1855. J. Thurnam, M.D., Wilts County Asylum.  
 1856. J. Hitchman, M.D., Derby County Asylum.  
 1857. Forbes Winslow, M.D., Sussex House, Hammersmith.  
 1858. John Conolly, M.D., County Asylum, Hanwell.  
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 1861. Joseph Lalor, M.D., Richmond Asylum, Dublin.  
 1862. John Kirkman, M.D., Suffolk County Asylum.  
 1863. David Skae, M.D., Royal Edinburgh Asylum.  
 1864. Henry Munro, M.D., Brook House, Clapton.  
 1865. Wm. Wood, M.D., Kensington House.  
 1866. W. A. F. Browne, M.D., Commissioner in Lunacy for Scotland.  
 1867. C. A. Lockhart Robertson, M.D., Haywards Heath Asylum.  
 1868. W. H. O. Sankey, M.D., Sandywell Park, Cheltenham.  
 1869. T. Laycock, M.D., Edinburgh.  
 1870. Robert Boyd, M.D., County Asylum, Wells.  
 1871. Henry Maudsley, M.D., The Lawn, Hanwell.

1872. Sir James Coxe, M.D., Commissioner in Lunacy for Scotland.  
 1873. Harrington Tuke, M.D., Manor House, Chiswick.  
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 1875. J. F. Duncan, M.D., Dublin.  
 1876. W. H. Parsey, M.D., Warwick County Asylum.  
 1877. G. Fielding Blandford, M.D., London.  
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 1880. G. W. Mould, M.R.C.S., Royal Asylum, Cheadle.  
 1881. D. Hack Tuke, M.D., London.  
 1882. Sir W. T. Gairdner, M.D., Glasgow.  
 1883. W. Orange, M.D., State Criminal Lunatic Asylum, Broadmoor.  
 1884. Henry Rayner, M.D., County Asylum, Hanwell.  
 1885. J. A. Eames, M.D., District Asylum, Cork.  
 1886. Geo. H. Savage, M.D., Bethlehem Royal Hospital.  
 1887. Fred. Needham, M.D., Barnwood House, Gloucester.  
 1888. T. S. Clouston, M.D., Royal Edinburgh Asylum.  
 1889. H. Hayes Newington, M.R.C.P., Ticehurst, Sussex.  
 1890. David Yellowlees, M.D., Gartnavel Asylum, Glasgow.  
 1891. E. B. Whitcombe, M.R.C.S., City Asylum, Birmingham.  
 1892. Robert Baker, M.D., The Retreat, York.  
 1893. J. Murray Lindsay, M.D., County Asylum, Derby.  
 1894. Conolly Norman, F.R.C.P.I., Richmond Asylum, Dublin.  
 1895. David Nicolson, M.D., C.B., State Criminal Lunatic Asylum, Broadmoor.  
 1896. William Julius Mickle, M.D., Grove Hall Asylum, Bow.  
 1897. Thomas W. McDowall, M.D., Morpeth, Northumberland.  
 1898. A. R. Urquhart, M.D., James Murray's Royal Asylum, Perth.  
 1899. J. B. Spence, M.D., Burntwood Asylum, nr. Lichfield, Staffordshire.  
 1900. Fletcher Beach, M.B., 79, Wimpole Street, W.  
 1901. Oscar T. Woods, M.D., District Asylum, Cork, Ireland.  
 1902. J. Wigglesworth, M.D., F.R.C.P., Rainhill Asylum, near Liverpool.  
 1903. Ernest W. White, M.B., M.R.C.P., City of London Asylum, Dartford, Kent.  
 1904. R. Percy Smith, M.D., F.R.C.P., 36, Queen Anne Street, Cavendish Square, London, W.  
 1905. T. Outtersen Wood, M.D., F.R.C.P., 40, Margaret Street, Cavendish Square, London, W.  
 1906. Robert Jones, M.D., F.R.C.P., F.R.C.S., Claybury Asylum, Woodford Bridge, Essex.  
 1907. P. W. MacDonald, M.D., County Asylum, Dorchester.  
 1908. Chas. A. Mercier, M.D., F.R.C.P., F.R.C.S., 34, Wimpole Street, London, W.  
 1909. W. Bevan-Lewis, M.Sc., L.R.C.P.

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1896. Allbutt, Sir T. Clifford, K.C.B., M.D., D.Sc., LL.D., F.R.S., F.R.C.P.  
 Regius Professor of Physic, Univ. Camb., St. Radegund's, Cambridge.  
 1881. Benedikt, Prof. M., Franciskaner Platz 5, Vienna.  
 1907. Bianchi, Prof. Leonardo, Manicomio Provinciale di Napoli. (*Corr. Mem.*, 1896.)  
 1900. Blumer, G. Alder, M.D., L.R.C.P. Edin., Butler Hospital, Providence, U.S.A. (*Ord. Mem.*, 1890.)  
 1900. Bresler, Johannes, M.D., Oberarzt, Lublinitz, Silesia. (*Corr. Mem.*, 1896.)  
 1881. Brosius, Dr., Bendorf-Sayn, near Coblenz, Germany.  
 1876. Browne, Sir J. Crichton, M.D. Edin., LL.D., F.R.S., Lord Chancellor's Visitor, Royal Courts of Justice, Strand, W.C. (*PRESIDENT*, 1878.)  
 1902. Brush, Edward N., M.D., Sheppard and Enoch Pratt Hospital, Towson, Maryland, U.S.A.  
 1887. Chapin, John B., M.D., Pennsylvania Hospital for the Insane, Philadelphia, U.S.A.  
 1909. Collins, Sir William J., D.L., M.P., M.D., M.S., B.Sc. Lond., F.R.C.S. Eng., 1, Albert Terrace, Regent's Park, N.W.

1902. Coupland, Sidney, M.D., F.R.C.P.Lond., Commissioner in Lunacy, 16, Queen Anne Street, Cavendish Square, London, W.
1872. { Courtenay, E. Maziere, B.A., M.B., M.Ch.Univ. Dubl., Inspector of  
1891. { Lunatics in Ireland, Lunacy Office, Dublin Castle. (*Secretary for Ireland*, 1876-87.)
1879. Echeverria, M. G., M.D.
1895. Ferrier, David, M.A., M.D., LL.D., F.R.S., F.R.C.P., 34, Cavendish Square, London.
1872. Fraser, John, M.B., C.M., F.R.C.P.E., Commissioner in Lunacy, 13, Heriot Row, Edinburgh.
1898. Hine, George T., F.R.I.B.A., 35, Parliament Street, London, S.W.
1881. Hughes, C. H., M.D., St. Louis, Missouri, United States.
1909. Kraepelin, Dr. Emil, Professor of Psychiatry, The University, Munich.
1887. Lentz, Dr., Asile d'Aliénés, Tournai, Belgique.
1898. Magnan, V., M.D., Asile de Ste. Anne, Paris.
1866. { Mitchell, Sir Arthur, K.C.B., M.A., M.D., LL.D., late Commissioner in  
1871. { Lunacy for Scotland; 34, Drummond Place, Edinburgh.
1897. Morel, M. Jules, M.D., States Lunatic Asylum, Mons, Belgium.
1880. Motet, M., 161, Rue de Charonne, Paris.
1889. Needham, Frederick, M.D.St. And., M.R.C.P.Edin., M.R.C.S.Eng., Commissioner in Lunacy, 19, Campden Hill Square, Kensington, W. (*PRESIDENT*, 1887.)
1909. Obersteiner, Dr. Heinrich, Professor of Neurology, The University, Vienna.
1891. O'Farrell, Sir G. P., M.A., M.D., Univ. Dubl., Inspector of Lunatics in Ireland, 19, Fitzwilliam Square, Dublin.
1881. Peeters, M., M.D., Gheel, Belgium.
1900. Ritti, Ant., 68, Boulevard Exelmans, Paris. (*Corr. Mem.*, 1890.)
1887. Schüle, Heinrich, M.D., Illenau, Baden, Germany.
1881. Tamburini, A., M.D., Reggio-Emilia, Italy.
1901. Toulouse, Dr. Edouard, Directeur du Laboratoire de Psychologie expérimentale à l'Ecole des Hautes Etudes Paris et Médecin en chef de l'Asile de Villejuif, Seine, France.
1904. Tuke, Sir John Batty, M.P., M.D., D.Sc., LL.D., F.R.C.P., 20, Charlotte Square, Edinburgh.

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1896. Cowan, F. M., M.D., 107, Perponcher Straat, The Hague, Holland.
1902. Estense, Benedetto Giovanni Selvatico, M.D., 116, Piazza Porta Pia, Rome.
1907. Ferrari, Giulio Cesare, M.D., Director of the Manicomio Provinciale, Imola, Bologna, Italy.
1904. Koenig, William Julius, Deputy Superintendent, Dalldorf Asylum, Berlin.
1880. Kornfeld, Dr. Hermann, Hotel Kepherta, Frume, Austria.
1889. Kowalowsky, Professor Paul, Kharkoff, Russia.
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1901. Manheimer-Gommès, Dr., 32, Rue de l'Arcade, Paris.
1909. Moreira, Dr. Julien, M.D.Bahia, Professor and Director of the National Manicomium of Rio de Janeiro (*Editor of the Brazilian Archives of Psychiatry, etc.*).
1897. Näcke, Dr. P., Hubertusberg Asylum, Leipzig.
1886. Parant, M. Victor, M.D., Toulouse.
1909. Pilcz, Dr. Alexander (Professor of Psychiatry in the University of Vienna), Superintendent Landessanatorium für Nerven und Geistes- kranke Steinhof, Vienna.
1890. Régis, Dr. E., 54, Rue Huguerie, Bordeaux.
1893. Semelaigne, Dr. René, Secrétaire des Séances de la Société Médico- Psychologique de Paris, 16, Avenue de Madrid, Neuilly, Seine, France.

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*Alphabetical List of Members of the Association, with the year in which they joined. The Asterisk means Members who joined between 1841 and 1855.*

1900. Abbott, Henry Kingsmill, M.D.Dublin, D.P.H.Ireland, Medical Superintendent, Hants County Asylum, Fareham.
1891. Adair, Thomas Stewart, M.D., C.M.Edin., Medical Superintendent, Storthes Hall Asylum, Kirkburton, near Huddersfield. (*Hon. Sec. N. and M. Division since 1908.*)
1910. Adam, George Henry, M.R.C.S., L.R.C.P.Lond., Manager and Medical Superintendent, West Malling Place, Kent.
1868. Adams, Josiah O., M.D.Durh., F.R.C.S.Eng., 117, Cazenove Road, Clapton, N.E.
1886. Agar, S. Hollingsworth, jun., B.A.Cantab., M.R.C.S., Hurst House, Henley-in-Arden.
1905. Alcock, Benjamin James, M.A., M.B.Aberd., Ch.B., James Murray's Royal Asylum, Perth.
1869. Aldridge, Chas., M.D.Aber., L.R.C.P., Plympton House, Plympton, Devon.
1905. Alexander, Edward Henry, M.B., M.R.C.S., Physician Superintendent, Ashbourne Hall Asylum, Dunedin, New Zealand.
1899. Alexander, Hugh de Maine, M.D., Medical Superintendent, Aberdeen City District Asylum, Kingseat, Newmachar, Aberdeen.
1890. Alexander, Robert Reid, M.D.Aber., 25, Lingfield Avenue, Kingston-on-Thames.
1882. Alliot, A. J., M.D., Ferndale, St. John's Hill, Sevenoaks.
1899. Allmann, Dorah Elizabeth, M.B., B.Ch., B.A.O.R.U.I., Assistant Medical Officer, District Asylum, Armagh.
1885. Amsden, Geo., M.B., Medical Supt., County Asylum, Brentwood, Essex.
1908. Anderson, James Richard Sunner, M.B., Ch.B.Glas., Senior Assistant Medical Officer, Cumberland and Westmorland Asylum, Garlands, Carlisle.
1900. Anderson, John Sewell, M.R.C.S., L.R.C.P., Hull City Asylum, Willerby, near Hull.
1909. Anderson, John Theodore, L.R.C.P.&S.Edin., L.F.P.S.Glasg., Senior Assistant Medical Officer, Hospital for the Insane, Perth, Australia.
1901. Anderson, William C., M.B., C.M., 15, King Street, Dundee, N.B.
1904. Archdale, Mervyn Alex., M.B., B.S.Dur., East Riding Asylum, Beverley, Yorks.
1905. Archdall, Mervyn Thomas, L.S.A.Lond., L.R.C.P.&S.Edin., Brynny-n-Nenadd Hall, Llanfairfechan, N. Wales.
1910. Aubrey, Gilbert Kennedy, L.M.&S., S.A., Assistant Medical Officer, Darent Asylum, Dartford, Kent.
1891. Aveline, Henry T.S., M.D., M.R.C.S., L.R.C.P., M.P.C., Medical Superintendent, County Asylum, Cotford, near Taunton, Somerset. (*Hon. Sec. for S.W. Division since 1905.*)
1909. Bagnall, Robert George Archibald, M.B., Ch.B.Edin., Newcastle City Asylum, Gosforth.
1903. Bailey, William Henry, M.D., M.R.C.S., L.S.A., Featherstone Hall, Southall, Midd.
1894. Baily, Percy J., M.B.Edin., Medical Superintendent, London County Asylum, Hanwell, W.
1909. Bain, John, M.A., M.B., B.Ch.Glasg., Assistant Medical Officer, Northampton County Asylum, Berrywood.
1906. Baird, Harvey, M.D., Ch.B.Edin., Senior Assistant Medical Officer, City Mental Hospital, Whitechurch, Cardiff.
1876. Baker, Robert, M.D.Edin., St. Paul's Square, York. (*PRESIDENT, 1892.*)
1878. Baker, H. Morton, M.B.Edin., Assistant Medical Officer, Leicester Borough Asylum, Humberstone, Leicester.
1888. Baker, John, M.D., Deputy Supt., State Asylum, Broadmoor, Berks.
1909. Ballard, Ernest Fryer, M.B., B.S.Lond., Assistant Medical Officer, Somerset and Bath Asylum, Wells.
1904. Barham, Guy Foster, M.B., B.A., B.C.Cantab., M.R.C.S., L.R.C.P., Senior Asst. Medical Officer, London County Asylum, Long-Grove, Epsom.



1901. Barnett, Horatio, M.B., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Stretton House, Church Stretton, Salop.
1878. Barton, James Edward, L.R.C.P.Edin., L.M., M.R.C.S., Medical Superintendent, Surrey County Lunatic Asylum, Brookwood, Woking.
1904. Barton, Samuel J., M.D.Dubl., Physician to the Norfolk and Norwich Hospital, Surrey Street, Norwich.
1901. Baskin, J. Loughheed, L.R.C.P.&S.Edin., L.F.P.S.Glas., Fisherton House, Salisbury.
1902. Baugh, Leonard D. H., M.B., C.M., Gartloch Asylum, Gartcosh, Glasgow, N.B.
1864. Bayley, Joseph, M.R.C.S., Medical Superintendent, St. Andrew's Hospital, Northampton.
1893. Bayley, Joseph Herbert, M.B., C.M.Edin., Assistant Medical Officer, St. Andrew's Hospital, Northampton.
1907. Bazalgette, Sidney, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Fishponds Asylum, Bristol.
1874. Beach, Fletcher, M.B., F.R.C.P.Lond., *formerly Medical Superintendent, Darenth Asylum, Dartford; Chandos Lodge, Alton, Hants. (General Secretary, 1889-1896. PRESIDENT, 1900.)*
1892. Beadles, Cecil F., M.R.C.S., L.R.C.P., The Clergy House, Indlefield Green, Surrey.
1902. Beale-Browne, Thomas Richard, M.R.C.S.Eng., L.R.C.P.Lond., Medical Staff, South Nigeria, West Africa.
1896. Beamish, George, L.R.C.S.I., L.R.C.P.E., L.M., c/o New Club, 4, Grafton Street, New Bond Street, W.
1909. Beeley, Arthur, M.Sc.Leeds, M.B., B.S.Lond., D.P.H.Camb. (*Assistant Medical Officer, E. Sussex Educational Committee*), 14, Park Avenue, Keighly, Sussex.
1899. Beresford, Edwyn H., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Tooting Bec Asylum, Tooting, S.W.
1879. Bevan-Lewis, William, M.Sc.Leeds, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, West Riding Asylum, Wakefield. (PRESIDENT, 1909-10.)
1894. Blachford, James Vincent, M.D., B.S.Durham, 87, Belvedere Road, Upper Norwood, S.E.
1908. Blackmore, Humphrey, P., M.D., Physician, Salisbury Infirmary.
1898. Blair, David, M.A., M.D., C.M., County Asylum, Lancaster.
1857. Blandford, George Fielding, M.D.Oxon., F.R.C.P.Lond., Woodlands, Camden Park, Tunbridge Wells. (PRESIDENT, 1877.)
1897. Blandford, Joseph John Guthrie, B.A., D.P.H.Camb., M.R.C.S.Eng., L.R.C.P.Lond., Senior Assistant Medical Officer, County Asylum, Whittingham, Preston, Lancs.
1908. Blandy, Gurth Swinnerton, M.B., Ch.B.Edin., Assistant Medical Officer, Middlesex County Asylum, Napsbury, Herts.
1904. Bodvel-Roberts, Hugh Frank, M.A.Cantab., M.R.C.S., L.R.C.P., Middlesex County Asylum, Napsbury, near St. Albans, Herts.
1900. Bolton, Joseph Shaw, M.D., B.S., B.Sc.Lond., Senior Assistant Medical Officer, County Asylum, Rainhill, Liverpool.
1892. Bond, Charles Hubert, D.Sc., M.D., Ch.M.Edin., Medical Superintendent, London County Asylum, Long-Grove, Epsom. (*Hon. General Secretary since 1906.*)
1877. Bower, David, M.D.Aber., Springfield House, Bedford.
1877. Bowes, John Ireland, M.R.C.S.Eng., L.S.A., Medical Superintendent, County Asylum, Devizes, Wilts.
1893. Bowes, William Henry, M.D.Lond., Assistant Medical Officer, Plymouth Borough Asylum, Ivybridge, Devon.
1900. Bowles, Alfred, M.R.C.S., L.R.C.P., 10, South Cliff, Eastbourne.
1896. Boycott, Arthur N., M.D.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, Herts County Asylum, Hill End, St. Albans, Herts. (*Hon. Sec. for S.-E. Division, 1900-05.*)
1898. Boyle, A. Helen A., M.D., 3, Palmeira Terrace, Hove, Brighton.
1883. Boys, A. H., L.R.C.P.Edin., The Grange, St. Peter's Street, St. Albans.

1891. Braine-Hartnell, George, M. P., L.R.C.P.Lond., M.R.C.S.Eng., Medical Superintendent, County and City Asylum, Powick, Worcester.
1881. Brayn, R., L.R.C.P.Lond., Medical Superintendent, Broadmoor Asylum, Crowthorne, Berks.
1895. Briscoe, John Frederick, M.R.C.S.Eng., Resident Medical Superintendent, Westbrooke House Asylum, Alton, Hants.
1905. Brown, Harry Egerton, M.D., M.P.C., West Koffies Asylum, Pretoria, S. Africa.
1904. Brown, Josephine, M.B.Lond., c/o Mrs. Barnett, Dockinfield Manor, near Farnham, Hants.
1908. Brown, Robert Cunyngham, M.D.Durh., Deputy Medical Officer, H.M. Prison, Parkhurst, Isle of Wight.
1908. Brown, R. Dods, M.D., M.R.C.P.Edin., D.P.H., Senior Assistant, West House, Morningside, Edinburgh.
1908. Brown, Relf, M.R.C.S., L.R.C.P.Lond., The Hall, Headcorn, Kent.
1893. Bruce, Lewis C., M.D.Edin., Druid Park, Murthly, N.B. (*Hon. Sec. for Scotland 1901-1907.*)
- \* Brushfield, Thomas N., M.D.St. And., The Cliff, Budleigh Salterton, Devon.
1892. Bullen, Frederick St. John, M.R.C.S.Eng., 12, Pembroke Road, Clifton, Bristol.
1908. Bullmore, Charles Cecil, J.P., L.R.C.P.&S.Edin., L.F.P.S.Glas., Medical Superintendent, Flower House, Catford.
1907. Burpitt, Harry Reginald, M.D.Bruce, M.R.C.S., L.R.C.P.Lond., Llanarthney, Newport, Mon.
1904. Burrell, Arthur Ambrose, M.B., B.Ch., Carrick Manor, Monkstown, Co. Dublin.
1891. Caldecott, Charles, M.B., B.S.Lond., M.R.C.S., Medical Superintendent, Earlswood Asylum, Redhill, Surrey.
1889. Calcott, James T., M.D., Medical Superintendent, Borough Asylum, Newcastle-on-Tyne.
1894. Campbell, Alfred Walter, M.D.Edin., Macquarie Chambers, 183, Macquarie Street, Sydney, New South Wales.
1909. Campbell, Donald Graham, M.B., Ch.M.Edin., Medical Officer, District Asylum, Elgin.
1880. Campbell, Patrick E., M.B., C.M.Edin., Medical Superintendent, Metropolitan Asylum, Caterham.
1897. Campbell, Robert Brown, M.B., C.M.Edin., Medical Superintendent, Stirling District Asylum, Larbert.
1897. Cappe, Herbert Nelson, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Surrey County Asylum, Brookwood.
1905. Carre, Henry, L.R.C.P., L.M., Woodilee Asylum, Lenzie, Glasgow.
1891. Carswell, John, L.R.C.P.Edin., L.F.P.S.Glasg., Certifying Medical Officer, Barony Parish, 5, Royal Crescent, Glasgow.
1874. Cassidy, D. M., M.D., C.M.McGill Coll., Montreal, D.Sc. (Public Health) Edin., F.R.C.S.Edin., Medical Superintendent, County Asylum, Lancaster.
1888. Chambers, James, M.A., M.D., The Priory, Roehampton. (*Co-Editor of Journal since 1905, Assistant Editor 1900-05.*)
1865. Chapman, Thomas Algernon, M.D.Glas., L.R.C.S.Edin., Betula, Reigate.
1907. Chislett, Charles G. A., M.B., Ch.B.Glasgow, Blomgate House, Lanark.
1880. Christie, J. W. Stirling, L.R.C.P.Edin., Medical Superintendent, County Asylum, Stafford.
1878. Clapham, Wm. Crochley S., M.D., F.R.C.P.Ed., The Five Gables, Mayfield, Sussex. (*Hon. Sec. N. and M. Division, 1897-1901.*)
1907. Clarke, Geoffrey, M.D.Lond., Assistant Medical Officer, London County Asylum, Long-Grove, Epsom.
1910. Clarke, James Kilian, M.B., B.Ch., B.A.O. (R.U.I.), North Eastern Hospital, St. Ann's Road, Tottenham, N.
1907. Clarke, Sidney Herbert, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Leicestershire and Rutland Asylum, Narborough, near Leicester.

1901. Cleland, William Lennox, M.B., B.Ch.Edin., Park Side, Adelaide, South Australia.
1862. Clouston, T. S., M.D., LL.D.Edin., F.R.C.P., F.R.S.E., 26, Heriot Row, Edinburgh. (*Editor of Journal*, 1873—1881.) (PRESIDENT, 1888.)
1900. Coffey, Patrick, L.R.C.P.&S.I., District Asylum, Maryborough, Queen's Co., Ireland.
1892. Cole, Robert Henry, M.D.Lond., M.R.C.P.Lond., 25, Upper Berkeley Street, W.
1900. Cole, Sydney John, M.A., M.D., B.Ch.Oxon., Senior Assistant Medical Officer, Wilts County Asylum, Devizes.
1906. Collen, Edward Victor, M.D., B.Ch., B.A.O.Dubl., Killycomain House, Portstown, Ireland.
1906. Collier, Walter Edgar, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Kent County Asylum, Maidstone.
1903. Collins, Michael Abdy, M.B., B.S., M.R.C.S., L.R.C.P.Lond., London County Asylum, Bexley, Kent.
1888. Cones, John A., M.R.C.S., 2, Portland Place, Kemp Town, Brighton.
1895. Conry, John, M.D.Aber., Fort Beaufort Asylum, South Africa.
1878. Cooke, Edward Marriott, M.D., M.R.C.S.Eng., Commissioner in Lunacy, 69, Onslow Square, S.W.
1909. Cooke, John Benson, L.R.C.S.&P.Edin. (*H.M. Prison Service*), Love Lane, Wakefield.
1910. Coombes, Percival Charles, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Surrey County Asylum, Nethern, Merstham.
1905. Cooper, K. D., L.R.C.P.&S.Edin., L.F.P.S.Glas., c/o Leopold & Co., Apollo, Bunder, Bombay.
1903. Cormac, Harry Dove, M.B., B.S.Madras, Parkside Asylum, Macclesfield.
1891. Corner, Harry, M.D.Lond., M.R.C.S., L.R.C.P., M.P.C., 37, Harley Street, W.
1905. Cotter, James, L.R.C.P.&S.E., L.F.P.S.Glas., Down District Asylum, Downpatrick.
1897. Cotton, William, M.A., M.D.Edin., D.P.H.Cantab., 231, Gloucester Road, Bishopston, Bristol.
1893. Cowen, Thomas Philip, M.D., B.S.Lond., Assistant Medical Officer, County Asylum, Lancaster.
1884. Cox, L. F., M.R.C.S., Medical Superintendent, County Asylum, Denbigh.
1893. Craig, Maurice, M.A., M.D., B.C.Cantab., F.R.C.P.Lond., 54, Welbeck Street, W.
1904. Crawford, William Thomson, M.B.Lond., M.R.C.S., L.R.C.P., East Sussex Asylum, Hellingly, Sussex.
1906. Creighton, John Alexander, M.B., C.M., West Riding Asylum, Wakefield.
1897. Cribb, Harry Gifford, M.R.C.S.Eng., L.R.C.P.Lond., Senior Assistant Medical Officer, London County Asylum, Cane Hill, Coulsdon, Surrey.
1909. Crichton, Crawford S., M.B., Ch.B.Edin., Mansfield, Arbroath, N.B.
1904. Cross, Harold Robert, L.S.A., Storthes Hall Asylum, Kirkburton, near Huddersfield.
1909. Crowther, Sydney Nelson, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Netherne County Asylum, Surrey.
1894. Cullinan, Henry M., L.R.C.P.I., L.R.C.S.I., Resident Medical Superintendent, Portrane House, Donabate, Co. Dublin.
1905. Cummins, Edmund Joseph, L.R.C.P.&S.Edin., Richmond Place, Clonmel, Co. Tipperary, Ireland.
1907. Daniel, Alfred Wilson, B.A., M.D., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, London County Asylum, Hanwell, W.
1905. Darbyshire, Harold Stewart C., M.R.C.S.Eng., L.R.C.P.Lond., Grosvenor House, West Ealing, W.



1896. Davidson, Andrew, M.D., C.M.Aber., Callan Park, Sydney, N.S.W.
1891. Davis, Arthur N., L.R.C.P., L.R.C.S.Edin., Medical Superintendent, County Asylum, Exminster, Devon.
1894. Dawson, William R., M.D., B.Ch.Dubl., F.R.C.P.I., Medical Superintendent, Farnham House Asylum, Finglas, Dublin. (*Hon. Divisional Sec. for Ireland since 1902.*)
1883. De Lisle, Samuel Ernest, L.R.C.P., L.R.C.S.I., Three Counties Asylum, Stotfold, Herts.
1901. De Steiger, Adèle, M.B.Lond., County Asylum, Brentwood, Essex.
1905. Devine, Henry, M.D., B.S., M.R.C.P.Lond., M.R.C.S., London County Asylum, Long-Grove Asylum, Epsom, Surrey.
1904. Devon, James, L.R.C.P. & S.Edin., 6, Cathedral Square, Glasgow.
1903. Dickson, Thomas Graeme, L.R.C.P. & S.Edin., Medical Superintendent, Wye House, Buxton.
1909. Dillon, Kathleen, L.R.C.P.I., L.M., L.R.C.S.I., Assistant Medical Officer, District Asylum, Mullingar.
1905. Dixon, J. Francis, M.D., B.Ch., B.A.O., B.A.Dubl., Three Counties Asylum, Arlesley, Hitchin.
1909. Dobson, Margaret Bernard, M.D.Lond., 75, Eaton Rise, Ealing, W.
1879. Dodds, William J., M.D., D.Sc.Edin., Valkenburg, Mowbray, near Cape Town, South Africa.
1908. Donald, Robert, M.B., Ch.B.Glas., Ashton, Plains, Airdrie, N.B.
1886. Donaldson, Robert Lockhart, B.A., M.D., B.Ch.Univ. of Dubl., M.P.C., Medical Superintendent, District Asylum, Monaghan.
1889. Donaldson, William Ireland, B.A., M.D., B.Ch.Univ. of Dubl., Medical Superintendent, County of London Manor Asylum, Epsom, Surrey.
1892. Donelan, John O'Connor, L.R.C.P.I., L.R.C.S.I., M.P.C., Medical Superintendent, Richmond Asylum, Dublin.
1899. Donelan, Thomas O'Connor, L.R.C.P. & L.R.C.S.I., Middlesex County Asylum, Napsbury, near St. Albans, Herts.
1902. Douglas, Archibald R., L.R.C.P. & S.Edin., L.F.P.S.Glas., Royal Albert Asylum, Lancaster.
1890. Douglas, William, M.D.Queen's Univ. Irel., M.R.C.S.Eng., Brandfold, Goudhurst.
1905. Dove, Augustus Charles, M.D.Durh., M.B., B.S., "Brightside," Crouch End Hill, N.
1897. Dove, Emily Louisa, M.B.Lond., Wycombe Abbey, High Wycombe, Bucks.
1903. Dow, William Alex., M.D., B.S.Durh., M.R.C.S., L.R.C.P., D.P.H., H.M. Prison, Lewes.
1884. Drapes, Thomas, M.B., Medical Superintendent, District Asylum, Ennis-corthy, Ireland.
1905. Drew, Capt. Charles Milligan, M.A., M.B., Ch.B.Glas., R.A.M.C., c/o Messrs. Holt & Co., 3, Whitehall Place, S.W.
1907. Dryden, A. Mitchell, M.B., Ch.B.Edin., City Asylum, Gosforth, Newcastle-on-Tyne.
1902. Dudgeon, Herbert Wm., M.D.Durh., M.R.C.S.Eng., L.R.C.P.Lond., Medical Officer to the Egyptian Asylum, Abbassia, Cairo, Egypt.
1899. Dudley, Francis, L.R.C.P. & S.I., Senior Assistant Medical Officer, County Asylum, Bodmin, Cornwall.
1905. Dunlop, James Craufurd, M.D.Edin., L.R.C.P.Edin., M.R.C.S.E., Superintendent of Statistical Department, H.M. General Registry of Births, Marriages, and Deaths, Scotland, 33, Chester Street, Edinburgh.
1903. Dunston, John Thomas, M.D., B.S.Lond., Medical Superintendent, West Koppies, Pretoria.
1907. Dwyer, Patrick J., M.B., B.Ch., R.U.I., Salisbury House, Rathgar, Dublin.
1899. Eades, Albert I., L.R.C.P. & S.I., North Riding Asylum, Clifton, Yorks.

1903. Eady, George John, M.D., M.R.C.P.Edin., M.R.C.S.Eng., 6, Roland Houses, S. Kensington, S.W.
1874. Eager, Reginald, M.D.Lond., M.R.C.S.Eng., Northwoods, near Bristol.
1906. Eager, Richard, M.B., Ch.B.Aber., Assistant Medical Officer, Devon County Asylum, Exminster.
1873. Eager, Wilson, L.R.C.P.Lond., M.R.C.S.Eng., St. Aubyn's, Woodbridge, Suffolk.
1881. Earle, Leslie, M.D.Edin., 108, Gloucester Terrace, Hyde Park, W.
1891. Earls, James Henry, M.D., M.Ch., Claremont, Loughton, Essex.
1903. East, Guy Rowland, M.B.Durh., Northumberland County Asylum, Morpeth.
1907. East, Wm. Norwood, M.D., Lond., M.R.C.S., L.R.C.P., 2, North Road, Clapham Park, S.W.
1895. Easterbrook, Charles C., M.A., M.D., F.R.C.P.Ed., Physician Superintendent, Crichton Royal Institution, Dumfries.
1895. Edgerley, Samuel, M.D., M.A., C.M.Edin., Assistant Medical Officer, West Riding Asylum, Menston, nr. Leeds.
1900. Edridge-Green, Frederic W., M.D., F.R.C.S., Hendon Grove, Hendon.
1897. Edwards, Francis Henry, M.D.Bru., M.R.C.P.Lond., Medical Superintendent, Camberwell House, S.E.
1901. Elgee, Samuel Charles, L.R.C.P., L.R.C.S.I., London County Asylum, Horton, Epsom, Surrey.
1889. Elkins, Frank Ashby, M.D., Medical Superintendent, Metropolitan Asylum, Leavesden.
1898. Ellerton, Henry B., M.R.C.S., L.R.C.P., Leavesden Asylum, King's Langley R.S.O., Herts.
1873. Elliot, G. Stanley, M.R.C.P.Edin., F.R.C.S.Edin., 31, Belvedere Road, Upper Norwood, S.E.
1908. Ellis, Edward, M.D.Durh., L.R.C.S. & P.Edin., Craven House, Halifax, Yorks.
1890. Ellis, William Gilmore, M.D.Bru., M.R.C.S.Eng., L.S.A., Superintendent, Government Asylum, Singapore.
1908. Ellison, Arthur, M.R.C.S., L.R.C.P., Deputy Medical Officer, H.M. Prison, Leeds, 120, Domestic Street, Holbeck, Leeds.
1899. Ellison, F. C., M.D., B.Ch., T.C.D., Assistant Medical Officer, District Asylum, Castlebar.
1901. Erskine, Wm. J. A., M.D., C.M., Senior Assistant Medical Officer, City Asylum, Nottingham.
1895. Eurich, Frederick Wilhelm, M.D., C.M.Edin., 4, Marlborough Road, Bradford.
1894. Eustace, Henry Marcus, M.D., B.Ch., B.A.T.C.D., Assistant Physician, Hampstead and Highfield Private Asylum, Glasnevin, Dublin.
1909. Eustace, William Neilson, L.R.C.S. & P.Irel., L.M., Hampstead, Glasnevin, co. Dublin.
1909. Evans, George, M.B.Lond., Assistant Medical Officer, London County Asylum, Bexley.
1897. Everett, William, M.D., The Headlands, Kettering, Northamptonshire.
1891. Ewan, John Alfred, M.A.St. And., M.D.Edin., Medical Superintendent, Kesteven, County Asylum, Sleaford, Lincs.
1884. Ewart, C. T., M.D., C.M.Aberd., Senior Assistant Medical Officer, Claybury Asylum, Woodford Bridge, Essex.
1906. Ewens, George Francis William, Major I.M.S. Bengal, c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.
1907. Exley, John, L.R.C.P.I., L.M., M.R.C.S., Medical Officer, H.M. Prison, Grove House, New Wortley, Leeds.
1894. Farquharson, William F., M.D.Edin., Medical Superintendent, Counties Asylum, Garlands, Carlisle.

1907. Farries, John Stoddart, L.R.C.P., L.R.C.S.Edin., Medical Superintendent, Sandwell Hall, Handsworth, near Birmingham.
1908. Faulks, Edgar, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, London County Asylum, Bexley.
1903. Fennell, Charles Henry, M.A., M.D.Oxon, M.R.C.P.Lond., Senior Assistant Medical Officer, East Sussex Asylum, Hellingly, Sussex.
1908. Fenton, Henry Felin, M.B., Ch.B.Edin., Assistant Medical Officer, County and City Asylum, Powick, Worcester.
1907. Fergusson, J. J. Harrower, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Fife and Kinross Asylum, Cupar, Fife.
1897. Fielding, James, M.D., Victoria Univ., Canada, M.R.C.S.Eng., L.R.C.P. Edin., Medical Superintendent, Bethel Hospital, Norwich.
1906. Fielding, Saville James, M.B., B.S.Durh., Bethel Street, Norwich.
1873. Finch, John E. M., M.D., Medical Superintendent, Borough Asylum, Leicester.
1889. Finch, Richard T., B.A., M.B.Cantab., Orchardstede, Arterbury Road, Wimbledon, S.W.
1882. Finegan, A. D. O'Connell, L.R.C.P.I., Medical Superintendent, District Asylum, Mullingar, Ireland. (*Hon. Divisional Sec. for Ireland, 1898-1902.*)
1889. Finlay, David, M.D.Glasg., Medical Superintendent, County Asylum, Bridgend, Glamorgan.
1906. Firth, Arthur Hareus, M.A., M.B., B.Ch.Edin., Wadsley Asylum, near Sheffield.
1903. Fitzgerald, Alexis, L.R.C.P. & S.I., L.M., District Asylum, Waterford.
1894. Fitzgerald, Charles E., M.D., F.R.C.S.I., Surgeon-Oculist to the King in Ireland, 27, Upper Merrion Street, Dublin.
1888. Fitz-Gerald, Gerald C., M.D., B.C.Cantab., M.P.C., Medical Superintendent, Kent County Asylum, Chartham, nr. Canterbury.
1908. Fitzgerald, James Francis, L.R.C.P.&S.Irel., L.M., Assistant Medical Officer, District Asylum, Clonmel, Ireland.
1899. Fitzgerald, James J., M.D., B.Ch., B.A.O.R.U.I., Assistant Medical Officer, District Asylum, Cork.
1901. Fitzgerald, John J., M.D.Bru., L.R.C.P.&S.Edin., Assistant Medical Officer, District Asylum, Cork.
1907. Fleming, Geo. A., L.R.C.P.&S.Irel., Assistant Medical Officer, 100, Piccadilly, W.
1904. Fleming, Wilfrid Louis Remi, M.R.C.S., L.R.C.P., Suffolk House, Pirbright, Surrey.
1894. Fleury, Eleonora Lilian, M.D., B.Ch., R.U.I., Assistant Medical Officer, Richmond Asylum, Dublin.
1908. Flynn, Thos. Aloysius, L.R.C.P.&S.I., Assistant Medical Officer, Portrane Asylum, Donabate.
1902. Forde, Michael J., M.D., M.Ch., R.U.I., Assistant Medical Officer, Portrane Asylum, Ireland.
1902. Forster, Hermann Julius, L.R.C.P.I., L.S.A., Assistant Medical Officer, Brighton Borough Asylum, Hayward's Heath.
1906. Forster, R. A., M.B., Ch.B.Aber., The Asylum, Graham's Town, Cape Colony, S. Africa.
1906. Fortune, John, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Ladywell Sanatorium, Salford.
1909. Foulerton, Alexander Grant Russell, F.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Cantab. (*County Medical Officer of Health for E. Sussex*), Middlesex Hospital, W., and Haywards Heath, Sussex.
1861. Fox, Charles H., M.D.St. And., M.R.C.S.Eng., 35, Heriot Row, Edinburgh.
1896. France, Eric, M.B., B.S.Durh., Kensington Palace Mansions, De Vere Gardens, W.
1881. Fraser, Donald, M.D., 3, Orr Square, Paisley.

1901. French, Louis Alexander, M.R.C.S., L.R.C.P., H.M. Prison, Portland, Dorset.
1902. Fuller, Lawrence Otway, M.R.C.S.Eng., L.R.C.P.Lond., Eastern Counties Inebriates Reformatory, East Harling, Norfolk.
1906. Gane, Edward Palmer Steward, M.R.C.S.Eng., L.R.C.P.Lond., Borough Asylum, Ryehope, Sunderland.
1890. Gaudin, Francis Neel, M.R.C.S., L.S.A., M.P.C., Medical Superintendent, The Grove, St. Lawrence, Jersey.
1906. Gavin, Noel John Hay, M.B., Ch.B.Edin., West Riding Asylum, Wakefield.
1885. Gayton, Francis C., M.D.Aberd., M.R.C.S.Eng., County Asylum, Netherne, Merstham, Surrey.
1908. Geale, William James, L.R.C.P., L.F.P.S., Assistant Medical Officer, Scalebor Park, Burley-in-Wharfedale, Yorks.
1896. Geddes, John W., M.B., C.M.Edin., Medical Superintendent, County Borough Asylum, Berwick Lodge, Middlesbrough, Yorks.
1892. Gemmel, James Francis, M.B.Glasg., Medical Superintendent, County Asylum, Whittingham, Preston.
1904. Gibb, James Alex., M.B., Ch.B., Herrison, Dorchester.
1910. Gibson, Rae, M.B., Ch.B.Edin., M.R.C.S., Assistant Physician, Royal Asylum, Morningside, Edinburgh.
1899. Gilfillan, Samuel James, M.A., M.B.Edin., Senior Assistant Medical Officer, London County Asylum, Colney Hatch.
1910. Gilfillan, William, M.B., Ch.B.Glasg., Assistant Medical Officer, Woodilee, Lenzie.
1889. Gill, Stanley, B.A., M.D., M.R.C.P.Lond., Shaftesbury House, Formby, Liverpool.
1904. Gillespie, Daniel, M.B. (R.U.I.), Wadsley Asylum, near Sheffield.
1897. Gilmour, John Rutherford, M.B., F.R.C.P.Edin., Medical Superintendent, West Riding Asylum, Scalebor Park, Burley-in-Wharfedale, Yorks.
1906. Gilmour, Richard Withers, M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, St. Luke's Hospital, E.C.
1878. Glendinning, James, M.D.Glasg., L.R.C.S.Edin., L.M., Medical Superintendent, Joint Counties Asylum, Abergavenny.
1909. Gloyne, Stephen Roodhouse, M.B., B.Ch.Leeds, D.P.H.Lond. (*Assistant Medical Officer, East Sussex Educational Committee*), Elener, The Avenue, Lewes.
1898. Goldie-Scot, Thomas G., M.B., C.M.Edin., M.R.C.S., L.R.C.P., Pilmuir, Pencaitland, N.B.
1897. Good, Thomas Saxty, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, County Asylum, Littlemore, Oxford.
1889. Goodall, Edwin, M.D., B.S.Lond., F.R.C.P., Medical Superintendent, City Asylum, Cardiff.
1899. Gordon, James Leslie, M.B., Ch.B., Tooting Bec Asylum, Tooting, London, S.W.
- \* Gordon, William S., M.A., M.B., T.C.D., District Asylum, Mullingar.
1905. Gordon-Munn, John Gordon, M.D., F.R.S.E., Heigham Hall, Norwich.
1901. Gostwyck, C. H. G., M.B., Ch.B., Stirling District Asylum, Larbert.
1894. Graham, Samuel, L.R.C.P.Lond., Assistant Medical Officer, District Asylum, Antrim.
1887. Graham, William, M.D., R.U.I., Medical Superintendent, District Lunatic Asylum, Belfast.
1908. Graham, William S., M.B., B.Ch., B.A.O., R.U.I., Assistant Medical Officer, Somerset and Bath Asylum, near Taunton.
1909. Greene, Thomas Adrian, L.R.C.S.Irel., L.M., R.C.P.Irel., Medical Superintendent, District Asylum, Carlow.
1886. Greenlees, T. Duncan, M.D., Fenstanton, Christ Church Road, Streatham Hill, S.W.



1904. Griffin, Ernest Harrison, B.A.Cantab., L.S.A.Lond., c/o H.B.M. Consul, Ciudad, Bolivia, Venezuela, S.A.
1901. Grills, Galbraith Hamilton, M.D., B.Ch., Assistant Medical Officer, County Asylum, Chester.
1900. Grove, Ernest George, M.R.C.S., L.R.C.P., Bootham Park, York.
1894. Gwynn, Charles Henry, M.D.Edin., co-Licensee, St. Mary's House, Whitchurch, Salop.
1905. Hallett, H. G., M.R.C.S., L.R.C.P.Lond., Darenth Asylum, Dartford, Kent.
1894. Halstead, Harold Cecil, M.D.Durh., Assistant Medical Officer, Peckham House, Peckham.
1903. Hanbury, Langton Fuller, M.R.C.S.Eng., L.R.C.P.Lond., West Ham Borough Asylum, Ilford, Essex.
1902. Hanbury, Saville Waldron, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, London County Asylum, Banstead, Surrey.
1903. Hankin, Chella Mary, M.B.Durh., 14, Elms Avenue, Muswell Hill, W.
1901. Harding, William, M.D., M.R.C.P.Lond., Medical Superintendent, Northampton County Asylum, Berry Wood, Northampton.
1899. Harmer, W. A., L.S.A., Resident Superintendent and Licensee, Redlands Private Asylum, Tonbridge, Kent.
1904. Harper-Smith, George Hastie, M.R.C.S., L.R.C.P., B.A.Cantab., Claybury, Woodford Bridge, Essex.
1898. Harris-Liston, L., M.D., M.R.C.S., L.R.C.P.Lond., L.S.A., Middleton Hall, Middleton St. George, Co. Durham.
1905. Hart, Bernard, M.B.Lond., M.R.C.S.Eng., Long-Grove Asylum, Epsom, Surrey.
1886. Harvey, Bagenal Crosbie, L.R.C.P., L.R.C.S., Assistant Medical Officer, District Asylum, Clonmel.
1892. Haslett, William John, M.R.C.S., L.R.C.P., Resident Medical Superintendent, Halliford House, Sunbury-on-Thames.
1891. Havelock, John G., M.D., C.M.Edin., Physician Superintendent, Montrose Royal Asylum.
1890. Hay, Frank, M.B., C.M., Inspector-General of Asylums for New Zealand, Government Buildings, Wellington, New Zealand.
1900. Haynes, Horace E., M.R.C.S., L.S.A., 32, Brunswick Terrace, Hove, Sussex.
1895. Hearder, Frederic P., M.D., C.M., Medical Superintendent, Yorkshire Inebriate Reformatory, Cattal, Whixley, near York.
1905. Henderson, George, M.A., M.B., 94, Fitzwilliam Street, Huddersfield.
1906. Herbert, Thomas, M.R.C.S.Eng., L.R.C.P., York City Asylum, Fulford, York.
1899. Herbert, William W., M.D., C.M.Edin., North Wales Counties Asylum, Denbigh, North Wales.
1877. Hetherington, Charles E., M.B., Medical Superintendent, District Asylum, Londonderry, Ireland.
1903. Hewitt, David Walker, M.B., B.Ch., R.U.I., Surgeon R.N., H.M.S. Powerful, Australia.
1877. Hewson, R. W., L.R.C.P.Edin., Medical Superintendent, Coton Hill, Stafford.
1902. Higginson, John Wigmore, M.R.C.S., L.R.C.P., Resident Medical Officer, Hayes Park Asylum, Hayes Park, Middlesex.
1882. Hill, H. Gardiner, M.R.C.S., Medical Superintendent, Middlesex County Asylum, Tooting.
1907. Hine, T. Guy Macaulay, M.A., B.C.Cantab., 37, Hertford Street, Mayfair, W.
1881. Hitchcock, Charles Knight, M.D., Bootham Park, York.
1909. Hodgson, Harold West, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Barnsley Hall Asylum, Bromsgrove, Worcestershire.

1908. Hogg, Archibald, M.B., Ch.B.Glas., Alexandra Infirmary, Paisley.
1900. Holländer, Bernard, M.D., M.R.C.S., L.R.C.P., 35A, Welbeck Street, London, W.
1903. Hopkins, Charles Leighton, M.B., B.C.Cantab., York City Asylum, Fulford, York.
1894. Hotchkis, Robert D., M.A., M.D., Renfrew Asylum, Dykebar, N.B.
1907. Howard, S. Carlisle, M.B., Ch.B.Aberd., Assistant Medical Officer, Horton Asylum, Epsom.
1900. Hughes, Percy T., M.B., Ch.M.Edin., D.P.H.Lond., Medical Superintendent, Worcestershire County Asylum, Barnseley Hall, Bromsgrove.
1904. Hughes, William Stanley, M.R.C.S., L.R.C.P., Park View, Aberayron, Cardiganshire.
1897. Hunter, David, M.A., M.B., B.C.Cantab., Medical Superintendent, West Ham Borough Asylum, Goodmayes, Ilford, Essex.
1909. Hunter, Douglas William, M.B., Ch.M.Glasg., Assistant Medical Officer, Royal Albert Asylum, Lancaster.
1904. Hunter, Percy Douglas, M.R.C.S., L.R.C.P.Lond., East Sussex County Asylum, Hellingly, Sussex.
1905. Hutchinson, Joseph Armstrong, M.D., M.S.Durh., Northallerton, Yorkshire.
1906. Huxley, Charles Rodney, L.R.C.P.&S.Edin., L.F.P.S.Glas., Kent House Road, New Beckenham, Kent.
1882. Hyslop, James, D.S.O., M.D., Natal Government Asylum, Pietermaritzburg.
1888. Hyslop, Theo. B., M.D., C.M.Edin., M.R.C.P.E., M.P.C., Bethlem Royal Hospital, S.E.
1908. Inglis, J. P. Park., M.B., Ch.B.Edin., Metropolitan Asylum, Caterham, Surrey.
1906. Irwin, Peter Joseph, L.R.C.P.&S.I., L.M., District Asylum, Limerick.
1866. Jackson, J. Hughlings, M.D.St. And., F.R.C.P.Lond., F.R.S., Physician to the Hospital for Epilepsy and Paralysis, &c., 3, Manchester Square, London, W.
1908. Jeffrey, Geo. Rutherford, M.B., Ch.B.Glas., Senior Assistant Physician, Crichton Royal Asylum, Dumfries.
1907. Jex-Blake, Bertha, M.B., Ch.B.Edin., Assistant Medical Officer, County and City Asylum, Hereford.
1910. Johnson, Cecil, M.B., Ch.B.Vict., 6, Palewell Park, East Sheen, S.W.
1905. Johnson, Smeeton, M.B.Lond., L.R.C.P., M.R.C.S., Langlands, Cleobury Mortimer, Salop.
1893. Johnston, Gerald Herbert, L.R.C.S. and L.R.C.P.Edin., Brooke House, Upper Clapton, N.
1905. Johnston, Thomas Leonard, L.R.C.P.&S.Edin., L.F.P.S.Glas., Bracebridge Asylum, Lincoln.
1878. Johnstone, J. Carlyle, M.D., C.M., Medical Superintendent, Roxburgh District Asylum, Melrose.
1903. Johnstone, Thomas, M.D.Edin., M.R.C.P.Lond., 32, Park Square, Leeds.
1880. Jones, D. Johnson, M.D.Edin., Medical Superintendent, Banstead Asylum, Surrey.
1882. Jones, Robert, M.D.Lond., B.S., F.R.C.P., F.R.C.S., Medical Superintendent, London County Asylum, Claybury, Woodford, Essex. (*Gen. Secretary from 1897 to 1906. PRESIDENT 1906-7.*)
1898. Jones, W. Ernest, M.R.C.S.Eng., L.R.C.P.Lond., The Old Treasury Buildings, Spring Street, Melbourne.
1879. Kay, Walter S., M.D., Medical Superintendent, South Yorkshire Asylum, Wadsley, near Sheffield.
1886. Keay, John, M.D., Bangour Village, Uphall, Linlithgowshire.

1899. Keegan, Lawrence Edward, M.D., Medical Superintendent, Lunatic Asylum, St. John's, Newfoundland.
1909. Keith, William Brooks, M.B., Ch.B.Aberd., Assistant Medical Officer, Kent County Asylum, Maidstone.
1909. Kellas, Arthur, M.B., Ch.B., D.P.H.Aberd., Senior Assistant Physician, Royal Asylum, Aberdeen.
1908. Kelly, Richard, M.B., B.Ch., B.A.C.Dub., Assistant Medical Officer, Storthes Hall Asylum, Kirkburton, near Huddersfield.
1898. Kemp, Norah, M.B., C.M.Glas., The Retreat, York.
1907. Keene, George Henry, M.D. (T.C.D.), Camberwell House, Peckham Road.
1899. Kennedy, Hugh T. J., L.R.C.P.&S.I., L.M., Assistant Medical Officer, District Asylum, Enniscorthy, Wexford.
1902. Kennedy, Patrick Gabriel, L.R.C.P.&S.Edin., L.F.P.S.Glasg., Assistant Medical Officer, London County Asylum, Banstead, Surrey.
1897. Kerr, Hugh, M.A., M.D.Glasg., Medical Superintendent, Bucks County Asylum, Stone, Aylesbury, Bucks.
1902. Kerr, Neil Thomson, M.B., C.M.Ed., Medical Superintendent, Lanark District Asylum, Hartwood, Shotts, N.B.
1893. Kershaw, Herbert Warren, M.R.C.S.Eng., L.R.C.P.Lond., Dinsdale Park, near Darlington.
1897. Kidd, Harold Andrew, M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, West Sussex Asylum, Chichester.
1903. King, Frank Raymond, B.A.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, Northumberland House, Finsbury Park, N.
1897. Kingdon, Wilfred Robert, M.B., B.S.Durh., 160, Goldhawk Road, W.
1905. Kingsbury, William Neave, M.R.C.S., L.R.C.P., 15, Blackheath Rise, Lewisham, S.E.
1902. King-Turner, A. C., M.B., C.M.Edin., The Retreat, Fairford, Gloucestershire.
1899. Kirwan, James St. L., B.A., M.B., B.Ch., B.A.O.Roy. Univ. Irel., Medical Superintendent, District Asylum, Ballinasloe, Ireland.
1908. Kirwan, Richard, R., M.B., B.Ch., B.A.O., R.U.I., Assistant Medical Officer, District Asylum, Castlebar.
1903. Kough, Edward Fitzadam, M.B., B.Ch., County Asylum, Gloucester.
1898. Labey, Julius, M.R.C.S., Medical Superintendent, Public Asylum, Jersey.
1902. Langdon-Down, Percival L., M.A., M.B., B.C.Cantab., Dixland, Hampton Wick, Middlesex.
1896. Langdon-Down, Reginald L., M.A., M.B., B.C.Cantab., M.R.C.P.Lond., Normansfield, Hampton Wick.
1909. Laurie, James, M.B., Ch.M.Glasg. (*Medical Officer, Smithston Asylum, etc.*), Red House, Ardgoan Street, Greenock.
1902. Laval, Evariste, M.B., C.M.Edin., Langho, nr. Blackburn.
1898. Lavers, Norman, M.D., M.R.C.S., Medical Superintendent, Bailbrook House, Bath.
1899. Law, Charles D., L.R.C.P.&S.Edin., L.F.P.G.S., 117, Wilderspool Road, Warrington.
1892. Lawless, George Robert, F.R.C.S.I., Medical Superintendent, District Asylum, Armagh.
1870. Lawrence, Alexander, M.A., M.D., County Asylum, Upton, Chester.
1883. Layton, Henry A., M.R.C.S.Eng., L.R.C.P.Edin., Cornwall County Asylum, Bodmin.
1909. Leech, John Frederick Wolseley, M.D.Dubl., Assistant Medical Officer, County Asylum, Devizes, Wilts.
1899. Leeper, Richard R., F.R.C.S.I., Medical Superintendent, St. Patrick's Hospital, Dublin.

1905. Le Fanu, Hugh, M.B., C.M.Aber., "Victoriaborg," Accra, West Africa.
1883. Legge, Richard J., M.D., Medical Superintendent, County Asylum, Mickleover, Derby.
1906. Leggett, William, B.A., M.B., B.Ch.Dubl., Assistant Medical Officer, Royal Asylum, Sunnyside, Montrose.
1894. Lentaigne, John, B.A., F.R.C.S.I., Medical Visitor of Lunatics to the Court of Chancery, 42, Merrion Square, Dublin.
1863. Ley, H. Rooke, M.R.C.S.Eng., Beaulieu, Westhy Road, Boscombe, Hants.
1859. Lindsay, James Murray, M.D.St.And., F.R.C.S. and F.R.C.P.Edin. 53, Victoria Road, Aldershot. (PRESIDENT, 1893.)
1908. Littlejohn, Edward Salteine, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, London County Asylum, Hanwell, W.
1903. Logan, Thomas Stratford, L.R.C.P.&S.Edin., L.F.P.S.Glas., County of London Epileptic Colony, Ewell, Surrey.
1906. Long, Sydney Herbert, M.D.Cantab., Physician to Norfolk and Norwich Hospital, 37, St. Giles Street, Norwich.
1899. Longworth, Stephen G., L.R.C.P. L.R.C.S.I., County Asylum, Melton, Suffolk.
1898. Lord, John R., M.B., C.M., Medical Superintendent, London County Asylum, Horton, Epsom. (*Assistant Editor of Journal since 1900.*)
1906. Lowry, James Arthur, M.B., B.Ch., B.A.O., R.U.I., Assistant Medical Officer, Middlesex County Asylum, Napsbury.
1904. Lyall, C. H. Gibson, L.R.C.P.&S.Edin., Leicester Borough Asylum, Leicester.
1906. Lyell, John Hepburn, M.D.Glasg., M.B., C.M., Assistant Medical Officer to H.M. Prison, the Royal Infirmary, and Parish Council, Perth, 15, Marshall Place, Perth.
1872. Lyle, Thomas, M.D.Glasg., 34, Jesmond Road, Newcastle-on-Tyne.
1906. Macarthur, John, M.R.C.S., L.R.C.P.Lond., The Hut, Manor Road, East Molesey.
1899. Macartney, William H. C., L.R.C.P.&S.I., Riverhead House, Sevenoaks.
1880. MacBryan, Henry C., L.R.C.P. & S. Edin., Kingsdown House, Box, Wilts.
1902. M'Carthy, Owen F., L.R.C.P.&S.I., District Lunatic Asylum, Cork, Ireland.
1900. McClintock, John, L.R.C.P. & L.R.C.S.Edin., Resident Medical Superintendent, Grove House, Church Stretton, Salop.
1900. McConaghey, John C., M.B., C.M.Edin., Parkside Asylum, Macclesfield, Cheshire.
1901. MacDonald, James H., M.B., Ch.B.Glasg., Govan District Asylum, Hawkhead, Paisley, N.B.
1884. MacDonald, P. W., M.D., C.M., Medical Superintendent, Dorset County Asylum, Herrison, Dorchester. (PRESIDENT, 1907-8; *Hon. Sec. S.W. Division* 1894 to 1905.)
1905. MacDonald, William Fraser, M.B., Ch.B.Edin., Olive Lodge, Polworth Terrace, Edinburgh.
1905. McDougall, Alan, M.D.Vict., M.R.C.S., L.R.C.P.Lond., Medical Director, The David Lewis Colony, Sandle Bridge, near Alderley Edge, Cheshire.
1906. McDowall, Colin Francis Frederick, M.B., B.S.Durh., Assistant Medical Officer, County Asylum, Hatton, nr. Warwick.
1870. McDowall, Thomas W., M.D.Edin., L.R.C.S., Medical Superintendent, Northumberland County Asylum, Morpeth. (PRESIDENT, 1897-8.)
1893. Macevoy, Henry John, M.D., B.Sc.Lond., M.P.C., 41, Buckley Road, Brondesbury, London, N.W.
1895. Macfarlane, Neil M., M.D.Aber., Medical Superintendent, Government Hospital, Thlotse Heights, Leribe, Basutoland, South Africa.
1883. Macfarlane, W. H., M.B. and Ch.B.Univ. of Melbourne, Medical Superintendent, Hospital for the Insane, New Norfolk, Tasmania.
1902. McGregor, John, M.B., Ch.B.Edin., Assistant Medical Officer, County Asylum, Bridgend, Glam.



1906. MacIlraith, Alex. Robert MacIntyre, Holly House, Rawtenstall, Lancs.
1905. MacIlraith, W. MacLaren, L.R.C.P. & S.Edin., L.F.P.S.Glasg.,  
L.D.S.R.C.S.Edin., Holly House, Rawtenstall, Lancs.
1909. McIntyre, Alex. Gray, M.D.Edin., Mansfield, Moncrief Avenue, Lenzie,  
N.B.
1899. McKelvey, Alexander Niel, L.&M.P.C.P.&S.I., The Asylum, Auckland,  
New Zealand.
1891. Mackenzie, Henry J., M.B., C.M.Edin., M.P.C., Assistant Medical Officer,  
The Retreat, York.
1903. Mackenzie, Theodore Charles, M.B., Ch.B.Edin., District Asylum,  
Inverness.
1908. MacKenzie, William Tuach, M.D., Medical Superintendent, Royal and  
District Asylums, Dundee.
1899. Mackeown, William John, A.B., M.B., B.A., O.R.U.I., A.M.O., County  
Asylum, Fareham, Hants.
1910. McKillop, Alexander Cameron, M.B., Ch.B.Edin., Assistant Medical  
Officer, District Asylum, Inverness.
1909. MacIachlan, John Thomson, M.D.Glasg. (*Assistant Physician, Glasgow  
Royal Infirmary*), 310, Renfrew Street, Glasgow.
1907. MacLeod, John A., M.B., Ch.B., Assistant Medical Officer, Lochmore,  
Lairg, Sutherlandshire.
1901. Macleod, Neil, M.D., C.M.Edin., H.B.M. Consular Surgeon and Surgeon to  
the General Hospital, Shanghai, China, 12, Whangpoo Road, Shanghai.
1904. Macnamara, Eric Danvers, M.A., M.B., 54, Welbeck Street, W.
1898. Macnaughton, George W. F., M.D., F.R.C.S.Edin., M.R.C.P.Lond.,  
33, Lower Belgrave Street, Eaton Square, London, S.W.
1882. McNaughton, John, M.D., 4, Corunna Street, Sandyford, Glasgow.
1882. Macphail, S. Rutherford, M.D.Edin., Derby Borough Asylum, Rowditch,  
Derby.
1896. Macpherson, Charles, M.D.Glas., Deputy Commissioner in Lunacy, 15,  
Rutland Square, Edinburgh.
1886. Macpherson, John, M.D., F.R.C.P., Commissioner in Lunacy, 8, Darnaway  
Street, Edinburgh.
1901. McRae, G. Douglas, M.D.Edin., F.R.C.P., Medical Superintendent,  
District Asylum, Ayr, N.B.
1902. Macrae, Kenneth Duncan Cameron, M.B., Ch.B.Edin., Lynwood,  
Murrayfield, Edinburgh.
1908. McWalter, William H., M.B., Ch.M.Glas., Medical Officer, H.M. Con-  
vict Prison, Peterhead.
1894. McWilliam, Alexander, M.A., M.B., C.M.Aber., Waterval, Odiham,  
Winchfield, Hants.
1865. Manning, Henry J., B.A.Lond., M.R.C.S., Laverstock House, Salisbury.
1908. Mapother, Edward, M.D., B.S.Lond., Assistant Medical Officer, London  
County Asylum, Long-Grove, Epsom.
1903. Marnan, John, M.B., B.Ch., City and County Asylum, Fishponds,  
Bristol.
1896. Marr, Hamilton C., M.D.Glasg.Univ., Medical Superintendent, Woodilee  
Asylum, Lenzie. (*Hon. Sec. Scottish Division since 1907.*)
1905. Marshall, Robert Macnab, M.D., Ch.B.Glasg., 21, Maxmill Drive,  
Pollokshields, Glasgow.
1908. Martin, Henry Cooke, M.B., Ch.B.Edin., Assistant Medical Officer,  
Newport Borough Asylum, Caerleon.
1896. Martin, James Charles, L.R.C.S.I., L.M., L.R.C.P., Assistant Medical  
Officer, District Asylum, Letterkenny, Donegal.
1908. Martin, James Ernest, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Assistant  
Medical Officer, London County Asylum, Long-Grove, Epsom.
1907. Martin, Mary Edith, L.R.C.P.&S.Edin., L.F.G.S.Glas., L.S.A.Lond.,  
3, Palmeria Terrace, Hove, Brighton.

1910. Masson, Charles Armit, M.A., M.B., Ch.B.Aberd., Assistant Medical Officer, Inverness District Asylum.
1904. May, George Francis, M.D., C.M. (McGill), L.S.A., Winterton Asylum, Ferryhill, Durham.
1907. Meek, Andrew Alexander Robertson, M.B., Ch.B.Glas., 185, Dalmarnoch Road, Glasgow.
1890. Menzies, William F., M.D., B.Sc.Edin., M.R.C.P.Lond., Medical Superintendent, Stafford County Asylum, Cheddleton, near Leek.
1891. Mercier, Charles A., M.D.Lond., F.R.C.P., F.R.C.S.Eng., Lecturer on Insanity, Westminster Hospital; 34, Wimpole Street, W. (PRESIDENT, 1908-9.)
1877. Merson, John, M.A., M.D.Aber., Medical Superintendent, Borough Asylum, Hull.
1871. Mickle, William Julius, M.D., F.R.C.P.Lond., 69, Linden Gardens, Bayswater, W. (PRESIDENT, 1896-7.)
1893. Middlemass, James, M.A., M.D., C.M., B.Sc.Edin., F.R.C.P., Medical Superintendent, Borough Asylum, Ryhope, Sunderland.
1910. Middlemiss, James Ernest, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Gartloch Asylum, Glasgow.
1883. Miles, George E., M.R.C.P., &c., Medical Superintendent, Hospital for the Insane, Rydalmere, New South Wales.
1887. Miller, Alfred, M.B. and B.C.Dubl., Medical Superintendent, Hatton Asylum, Warwick. (*Registrar since 1902.*)
1904. Miller, James Webster, M.B., Ch.B.Aberd., Wonford House, Exeter.
1893. Mills, John, M.B., B.Ch., and Diploma in Mental Diseases, R.U.I. District Asylum, Ballinasloe, Ireland.
1881. Mitchell, Richard B., M.D., Medical Supt., Midlothian District Asylum.
1878. Moody, Sir James M., M.R.C.S.Eng., L.R.C.P.&L.M.Edin., Medical Superintendent, County Asylum, Cane Hill, Coulsdon, Surrey.
1885. Moore, Edw. E., M.D.Dubl., M.P.C., Medical Superintendent, District Asylum, Letterkenny, Ireland.
1906. Moore, Francis Joseph, L.R.C.P.&S.Irel., Banstead Asylum, Sutton, Surrey.
1899. Moore, Wm. D., M.D., M.Ch., Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey.
1892. Morrison, Cuthbert S., L.R.C.P. and L.R.C.S.Edin., Medical Superintendent, County and City Asylum, Burghill, Hereford.
1910. Morton, Hugh, M.B., Ch.B.Glasg., Assistant Physician, Royal Asylum, Edinburgh.
1896. Morton, W. B., M.D.Lond., Assistant Medical Officer, Brislington House, Bristol.
1896. Mott, F. W., M.D., B.Sc., B.S., F.R.C.P.Lond., F.R.S., Pathological Laboratory, London County Asylum, Claybury, Essex.
1896. Mould, Gilbert E., M.R.C.S., L.R.C.P.Lond., The Grange, Rotherham, Yorks.
1897. Mould, Philip G., M.R.C.S.Eng., L.R.C.P.Lond., Molyneaux, Brow Station, near Manchester.
1908. Muirhead, Winifred, L.R.C.P., L.R.C.S.Edin., Assistant Medical Officer, Royal Asylum, Morningside, Edinburgh.
1907. Mules, Bertha Mary, M.B., B.S.Durh., Court Hall, Kenton, S. Devon.
1897. Mumby, Bonner Harris, M.D.Aber., D.P.H.Cantab., Medical Superintendent, Borough Asylum, Portsmouth.
1893. Murdoch, James William Aitken, M.B., C.M.Glasg., Medical Superintendent, Berks County Asylum, Wallingford.
1900. Murphy, Jerome J., M.R.C.S., L.R.C.P.Lond., Banstead Asylum, Sutton, Surrey.
1878. Murray, Henry G., L.R.C.P.I., L.M., L.R.C.S.I., Assistant Medical Officer, Prestwich Asylum, Manchester.
1905. Murrell, Christine Mary, M.D.Lond., B.S., Royal Free Hospital, 86, Porchester Terrace, Hyde Park, W.

1909. Myers, Charles Samuel, M.A., M.D.Cantab. (*University Lecturer in Experimental Psychology*), Great Shelford, Cambridgeshire.
1903. Navarra, Norman, M.R.C.S., L.R.C.P., City Asylum, Stone, Dartford.
1880. Neil, James, M.D.Aberd., M.P.C., Medical Superintendent, Warneford Asylum, Oxford.
1910. Neill, Alexander W., M.B., Ch.B.Glasg., Assistant Physician, Morning-side Royal Asylum, Edinburgh.
1903. Nelis, William F., M.D.Durh., L.R.C.P.Edin., L.F.P.S.Glasg., Newport Borough Asylum, Caerleon, Mon.
1875. Newington, Alexander, M.B.Camb., M.R.C.S.Eng., Woodlands, Ticehurst.
1873. Newington, H. Hayes. F.R.C.P.Edin., M.R.C.S.Eng., The Gables, Ticehurst, Sussex. (PRESIDENT, 1889.) (*Treasurer.*)
1909. Nicol, James, M.D., Ch.M.Edin., D.P.H.Lond. (*Senior Assistant Medical Officer, Caterham Asylum*), The Pines, Upper Caterham, Surrey.
1869. Nicolson, David, C.B., M.D., C.M.Aber., M.R.C.P.Edin., F.S.A.Scot., 201, Royal Courts of Justice, Strand, W.C. (PRESIDENT, 1895-6.)
1893. Nobbs, Athelstane, M.D., C.M.Edin., Layton House, Putney, S.W., and 261, Upper Richmond Road, Putney, S.W.
1888. Nolan, Michael J., L.R.C.P.I., M.P.C., Medical Superintendent, District Asylum, Downpatrick.
1909. Norman, Hubert James, M.B., Ch.B.Edin., D.P.H.Edin., Assistant Medical Officer, Camberwell House Asylum, S.E.
1885. Oakshott, James A., M.D., M.Ch. (R.U.I.), Medical Superintendent, District Asylum, Waterford, Ireland.
1903. O'Doherty, Patrick, B.A. and M.B.Irel., District Asylum, Omagh.
1904. O'Downey, Augustine Francis, L.R.C.P. & S. Edin., Salop and Montgomery County Asylum, Bicton Heath, nr. Shrewsbury.
1901. Ogilvy, David, B.A., M.D., B.Ch., L.M.Dub., Senior Assistant Medical Officer, London County Asylum, Horton, nr. Epsom, Surrey.
1892. O'Mara, Francis, L.R.C.P.&S.I., District Asylum, Ennis, Ireland.
1886. O'Neill, Edward D., M.R.C.P.I., Medical Superintendent, The Asylum, Limerick.
1868. Orange, William, M.D.Heidelb., F.R.C.P.Lond., C.B., Oakhurst, Godalming, Surrey. (PRESIDENT, 1883.)
1907. O'Reilly, Arthur Edward, L.R.C.S. & P.I., L.M., Hopetown, Cape Colony.
1902. Orr, David, M.B., C.M.Edin., Pathologist, County Asylum, Prestwich, Lancs.
1899. Osburne, Cecil A. P., F.R.C.S.Edin., L.R.C.P.Edin., The Grove, Old Catton, Norwich.
1890. Oswald, Landel R., M.B., M.P.C., Physician Superintendent, Royal Asylum, Gartnavel, Glasgow.
1899. Owen, Corbet W., M.B., C.M.Edin., 31, Victoria Place, High Street, Bangor, North Wales.
1905. Paine, Frederick, M.R.C.S., L.R.C.P., Claybury Asylum, Woodford Bridge, Essex.
1907. Parker, James, L.R.C.S.&P. and L.M.Irel., Assistant Medical Officer, West Riding Asylum, Wakefield.
1898. Parker, William Arnot, M.B., C.M., Medical Superintendent, Gartloch Asylum, Gartcosh, N.B.
1898. Pasmore, Edwin Stephen, M.D.Lond., M.R.C.P.Lond., Croydon Mental Hospital, Warlingham, Surrey.
1899. Paton, Robert N., L.R.C.P., L.R.C.S.Edin., Medical Officer, H.M. Prison, Wormwood Scrubs, London, W.
1899. Patrick, John, M.B., Ch.B., District Asylum, Belfast.
1892. Patterson, Arthur Edward, M.D., C.M.Aber., Senior Assistant Medical Officer, City of London Asylum, Dartford.

1905. Paul, Maurice Eden, M.D.Brux., M.R.C.S., L.R.C.P., Moorcroft, Parkstone, Dorset.
1907. Peachell, George Ernest, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, West Sussex County Asylum, Chichester.
1903. Pearce, Francis H., M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., Earlswood Asylum, Redhill, Surrey.
1893. Perceval, Frank, M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, County Asylum, Prestwich, Manchester, Lancashire.
1878. Philipps, Sutherland Rees, M.D., C.M. Queen's Univ. Irel., F.R.G.S. (Address uncommunicated.)
1875. Philipson, Sir George Hare, M.D. and M.A.Cantab., F.R.C.P.Lond., 7, Eldon Square, Newcastle-on-Tyne.
1908. Phillips, John George, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Assistant Physician, Bethlem Royal Hospital, Lambeth, S.E.
1906. Phillips, Nathaniel Richard, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, County Asylum, Abergavenny, Monmouthshire.
1905. Phillips, Norman Routh, M.D.Brux., M.R.C.S., L.R.C.P., St. Andrew's Hospital, Northampton.
1891. Pierce, Bedford, M.D.Lond., F.R.C.P., Medical Superintendent, The Retreat, York. (*Hon. Secretary N. and M. Division 190-8.*)
1888. Pietersen, J. F. G., M.R.C.S., Ashwood House, Kingswinford, near Dudley, Stafford.
1896. Planck, Charles, M.A.Camb., M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, The Asylum, Haywards Heath.
1889. Pope, George Stevens, L.R.C.P.&L.R.C.S.Edin., L.F.P.&S.Glasg., Medical Superintendent, Somerset and Bath Asylum, "Westfield," near Wells, Somerset.
1909. Potter, Scott, L.R.C.S.&P.Irel., Senior Assistant Medical Officer, Fisherton House, Salisbury.
1876. Powell, Evan, M.R.C.S.Eng., L.S.A., Medical Superintendent, Borough Lunatic Asylum, Nottingham.
1908. Prentice, Reginald Wickham, L.M.S.S.A.Lond., Beauworth Manor, Arlesford, Hants.
1904. Pringle, Archibald Douglas, M.B., Ch.B.Aberd., Government Asylum, Pietermaritzburg, Natal, South Africa.
1875. Pringle, Henry T., M.D.Glasg., Hawtree, Ferndown, Wimborne.
1901. Pugh, Robert, M.D.Edin., Ch.B., Medical Superintendent, Brecon and Radnor Asylum, Talgarth, S. Wales.
1904. Race, John Percy, M.R.C.S., L.R.C.P., L.S.A., Joint Counties' Asylum Carmarthen.
1908. Rains, George Hooper, L.S.A.Lond., 10, Grove Park, Redlands, Bristol.
1899. Rainsford, F. E., M.D., B.A.Dubl., Resident Physician, Stewart Institute, Palmerston, co. Dublin.
1894. Rambaut, Daniel F., M.A., M.D.Univ. Dubl., Salop and Montgomery Asylum, Bicton Heath, Shrewsbury.
1910. Rankine, Roger Aiken, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, Earlswood Asylum, Redhill.
1902. Rattray, A. Mair, M.B., C.M.Edin., City Asylum, Gosforth, Newcastle-on-Tyne.
1889. Raw, Nathan, M.D., B.S.Durh., L.S.Sc., F.R.C.S.Edin., M.R.C.P.Lond., 66, Rodney Street, Liverpool.
1893. Rawes, William, M.D.Durh., F.R.C.S.Eng., Medical Superintendent, St. Luke's Hospital, Old Street, London, E.C.
1870. Rayner, Henry, M.D.Aberd., M.R.C.P.Edin., 16, Queen Anne Street, London, W. (PRESIDENT, 1884.) (*General Secretary, 1878-89.*) (*Co-Editor of Journal since 1895.*)
1903. Read, George F., L.R.C.S., L.R.C.P.Edin., Hospital for the Insane, New Norfolk, Tasmania.
1899. Redington, John, F.R.C.S.&L.R.C.P.I., A.M.O., Richmond Asylum, Dublin.
1887. Reid, William, M.D.Aberd., Physician Superintendent, Royal Asylum, Aberdeen.



1886. Revington, George, M.A., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, Central Criminal Asylum, Dundrum, Ireland.
1907. Reynolds, Ernest Septimus, B.Sc.Vict., M.D., F.R.C.P.Lond., 2, St. Peter's Square, Manchester.
1899. Rice, David, M.D.Brux., M.R.C.S., L.R.C.P., Medical Superintendent, City Asylum, Hillesdon, Norwich.
1897. Richard, William J., M.A., M.B., C.M.Glasg., Medical Officer, Govan Parochial Asylum, Merryflats, Govan.
1899. Richards, John, M.B., C.M.Edin., F.R.C.S.E., Joint Counties Asylum, Carmarthen.
1905. Ridley, Edward Hope, M.D.Edin., The Asylum, Portsmouth.
1904. Rigden, Alan, M.D.Durh., Salop and Montgomery Asylum, nr. Shrewsbury.
1907. Rivers, William Gregory, M.B., Ch.B.Edin., Assistant Medical Officer, Cornwall County Asylum, Bodmin.
1893. Rivers, William H. R., M.A.Cantab., M.D.Lond., F.R.C.P., F.R.S., c/o C. H. Rivers, Esq., 11, Queen Victoria Street, E.C.
1903. Roberts, Norcliffe, M.B., B.S.Durh., London County Asylum, Cane Hill, Coulsdon, Surrey.
1905. Robertson, Constance C., M.D.Durh., B.S., Semmercote, Darlington.
1887. Robertson, Geo. M., M.B., F.R.C.P.Edin., Physician-Superintendent, Royal Asylum, Morningside, Edinburgh.
1908. Robertson, George Dunlop, L.R.C.S. & P.Edin., Assistant Medical Officer, District Asylum, Hartwood, Lanark.
1910. Robertson, Jane I., M.B., Ch.B.Glasg., Assistant Physician, Royal Asylum, Gartnavel, Glasgow.
1895. Robertson, William Ford, M.D., C.M., 48, Northumberland Street, Edinburgh.
1905. Robertson-Milne, Major Charles John, M.B., C.M.Aberd., Superintendent, Bengal Central Asylum, Berhampore, Bengal.
1900. Robinson, Harry A., M.D., Ch.B.Vict., 57, Canning Street, Liverpool.
1908. Rodgers, Frederick Millar, M.B., Ch.B.Vict., D.P.H., Senior Medical Officer, County Asylum, Winwick, Lancs.
1876. Rogers, Edward Coulton, M.R.C.S.Eng., L.S.A., County Asylum, Fulbourn, Cambridge.
1908. Rolleston, Charles Frank, B.A., M.B., Ch.B., B.A.O.Dub., Assistant Medical Officer, County of London, Manor Asylum, Epsom.
1895. Rolleston, Lancelot W., M.B., B.S.Durh., Medical Superintendent, Middlesex County Asylum, Napsbury, near St. Albans.
1879. Ronaldson, J. B., M.D.St.And., F.R.C.S. & L.R.C.P.Edin., D.P.H., Ennerdale, Haddington, N.B.
1879. Roots, William H., M.R.C.S., Canbury House, Kingston-on-Thames.
1899. Rorie, George Arthur, M.D., Ch.B.Edin., Senior Assistant Medical Officer, Dorset County Asylum, Dorchester.
1860. Rorie, James, M.D.Edin., L.R.C.S.Edin., 4, Roxburgh Terrace, West Park Road, Dundee. (*Late Hon. Secretary for Scottish Division.*)
1888. Ross, Chisholm, M.D.Syd., M.B., Ch.M.Edin., 147, Macquarie Street, Sydney, New South Wales.
1905. Ross, Sheila Margaret, M.D., Ch.B.Edin., Assistant Medical Officer of Health, 42, Cavill Drive, Fallowfield, Manchester.
1899. Rotherham, Arthur, M.A., M.B., B.C.Cantab., Medical Superintendent, Darenth Asylum, Dartford, Kent.
1906. Rowan, Marriott Logan, B.A., M.D., R.U.I., Assistant Medical Officer, Derby County Asylum, Mickleover.
1884. Rowe, Edmund L., L.R.C.P. & S.Edin., Medical Superintendent, Borough Asylum, Ipswich.
1883. Rowland, E. D., M.B., C.M.Edin., The Public Hospital, George Town, Demerara, British Guiana.

1902. Rows, Richard Gundry, M.D.Lond., M.R.C.S., L.R.C.P., Pathologist, County Asylum, Lancaster.
1877. Russell, Arthur P., M.B., M.R.C.P.Edin., The Lawn, Lincoln.
1907. Rutherford, Henry Richard Charles, L.R.C.P.&S.Irel., L.M., District Asylum, Ballinasloe, Co. Galway.
1866. Rutherford, James, M.D.Edin., F.R.C.P.Edin., F.F.P.S.Glas., Mountain-hall, Dumfries. (*Hon. Secretary for Scottish Division, 1876-86.*)
1896. Rutherford, James Mair, M.B., C.M., F.R.C.P.Edin., Brislington House, Bristol.
1907. Rutherford, James Whigham, L.R.C.P.&S.I., L.M., Assistant Medical Officer, Catford Asylum, Taunton.
1896. Rutherford, Robert Leonard, M.D. (R.U.I.), Medical Superintendent, Digby's Asylum, Exeter.
1908. Rutledge, W. E., M.R.C.S., L.R.C.P.Lond., County Asylum, Powick, Worcester.
1902. Sall, Ernest Frederick, M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, Borough Asylum, Canterbury.
1908. Sammon, William Douglas, L.R.C.S.&P., L.M.Irel., 15, Prince Patrick Terrace, North Circular Road, Dublin.
1908. Samuels, William Frederick, L.M.&L.S.Dubl., Anguilla, Leeward Islands, W. Indies.
1894. Sankey, Edward H. O., M.A., M.B., B.C.Cantab., Resident Medical Licensee, Boreatton Park Licensed House, Baschurch, Salop.
- \* Sankey, R. H. Heurtley, M.R.C.S.Eng., 3, Marston Ferry Road, Oxford.
1873. Savage, Geo. H., M.D.&F.R.C.P.Lond., 26, Devonshire Place, W. (*Late Editor of Journal.*) (PRESIDENT, 1886.)
1906. Scanlan, John J., L.R.C.P.&S.Edin., L.F.P.S.Glasg., D.P.H., 2B, Hyde Park Mansions, W.
1896. Scott, James, M.B., C.M.Edin., Governor's House, H.M. Prison, Holloway, N.
1889. Scowcroft, Walter, M.R.C.S., Medical Superintendent, Royal Lunatic Hospital, Cheadle, near Manchester.
1880. Seccombe, George S., M.R.C.S., L.R.C.P., c/o Messrs. H. S. King and Co., 65, Cornhill, E.C.
1879. Seed, William Hy., M.B., C.M.Edin., The Poplars, 110, Waterloo Road, Ashton-on-Ribble, Preston.
1906. Sephton, Robert Poole, B.A.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., County Lunatic Asylum, Lancaster.
1882. Seward, William J., M.B.Lond., M.R.C.S., Medical Superintendent, Colney Hatch Asylum, London, N.
1901. Shaw, B. Henry, M.B., B.Ch., B.A.O., R.M.I., Assistant Medical Officer, County Asylum, Stafford.
1909. Shaw, Capt. William Samuel J., M.B., B.Ch.Irel., I.M.S., c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W.
1905. Shaw, Charles John, M.D., Ch.B., F.R.C.P.E., Medical Superintendent, Argyle and Bute Asylum, Lochgelhead.
1891. Shaw, Harold B., B.A., M.B., D.P.H.Camb., Medical Superintendent, Isle of Wight County Asylum, Whitecroft, Newport, Isle of Wight.
1904. Shaw, Patrick, L.R.C.P.&S.Edin., Medical Officer, Hospital for the Insane, Kew, Victoria, Australia.
- Shaw, T. Claye, M.D.Lond., F.R.C.P.Lond., 30, Harley Street, London, W.
1882. Sheldon, Thomas S., M.B.Lond., M.R.C.S., Medical Superintendent, Cheshire County Asylum, Parkside, Macclesfield.
1909. Shepherd, George Ferguson, L.R.C.S.&P.Irel., Assistant Medical Officer, St. Edmundsbury, Lucan.
1900. Shera, John E. P., M.D.Brux., L.R.C.P.&S.Irel., Somerset County Asylum, Wells, Somerset.
1877. Shuttleworth, George E., M.D.Heidelb., M.R.C.S. and L.S.A.Eng., B.A. Lond., Parkholme, East Sheen, S.W. (*Late Medical Superintendent, Royal Albert Asylum, Lancaster.*)

1899. Sibley, Reginald Oliver, M.B.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, London County Asylum, Cane Hill, Coulsdon, Surrey.
1901. Simpson, Alexander, M.A., M.D.Aber., Medical Superintendent, County Asylum, Winwick, Newton-le-Willows, Lancashire.
1905. Simpson, Edward Swan, M.B., Ch.B.Edin., East Riding Asylum, Beverley, Yorks.
1888. Sinclair, Eric, M.D.Glasg., Richmond Terrace, Demain, Sydney, New South Wales.
1891. Skeen, James Humphry, M.B., C.M.Aber., Medical Superintendent, Kirklands Asylum, Bothwell.
1898. Skeen, William St. John, M.B., C.M., County Asylum, Winterton, Ferryhill, Durham.
1900. Skinner, Ernest W., M.D., C.M.Edin., Mansfield, Rye, Sussex.
1901. Slater, George N. O., M.D.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, Essex County Asylum, Brentwood.
1897. Smalley, Herbert, M.D.Durh., L.R.C.P., M.R.C.S., Prison Commission, Home Office, Whitehall, S.W.
1907. Smith, Ch. Mollyson, M.B., Ch.B.Aberd., Assistant Medical Officer, County Asylum, Prestwich, Manchester.
1905. Smith, George William, M.B., Ch.M.Edin., Holloway Sanatorium, Virginia Water, Surrey.
1907. Smith, Henry Watson, M.B., Ch.B., Medical Superintendent, Lebanon Hospital for the Insane, Asfurugeh, near Beyrout, Syria.
1899. Smith, John G., M.D., Ch.M.Edin., Herts County Asylum, Hill End, St. Albans, Herts.
1885. Smith, R. Percy, M.D., B.S.Lond., F.R.C.P., M.P.C., 36, Queen Anne Street, Cavendish Square, W. (*General Secretary*, 1896-7.) (*PRESIDENT*, 1904-5.)
1884. Smith, W. Beattie, F.R.C.S.Edin., L.R.C.P.Edin., 4, Collins Street, Melbourne, Victoria.
1903. Smith, William Maule A., M.D., Ch.B.Edin., M.R.C.P.Edin., Senior Assistant Medical Officer, Worcester County Asylum, Barnsley Hall, Bromsgrove.
1901. Smyth, Robt. B., M.A., M.B., Ch.B.Dubl., Senior Assistant Medical Officer, County Asylum, Gloucester.
1899. Smyth, Walter S., M.B., B.Ch., R.U.I., Assistant Medical Officer, County Asylum, Antrim.
1885. Soutar, James Grieg, M.B., Ch.M.Edin., Barnwood House, Gloucester.
1906. Spark, Percy Charles, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, The Colony, Ewell, Surrey.
1883. Spence, John Buchan, M.B., Ch.M.Edin., L.R.C.P.&S., The Asylum, Colombo, Ceylon.
1875. Spence, J. Beveridge, M.D., M.C.Queen's Univ., Medical Superintendent, Burntwood Asylum, near Lichfield. (*PRESIDENT*, 1899-1900, formerly *Registrar*.)
1891. Stansfield, T. E. K., M.B., C.M.Edin., Baldwyn's Park, Bexley, Kent.
1901. Starkey, William, M.B., B.Ch., B.A.O.Roy. Univ. Irel., Assistant Medical Officer, Lancashire County Asylum, Prestwich, near Manchester.
1907. Steele, Patrick, M.D., Ch.B.Edin., Assistant Medical Officer, Bangeur Village, Dechmont, Linlithgowshire.
1898. Steen, Robert H., M.D.Lond., Medical Superintendent, City of London Asylum, Stone, Dartford. (*Hon. Sec. S.E. Division since 1905.*)
1909. Steward, Sidney John, M.D., B.C.Cantab., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, St. Mary's Infirmary, Highgate Hill, N.
1907. Stewart, Helen C., M.B., Ch.B.Birm., 33, Park Square, Leeds.
1868. Stewart, James, F.R.C.P.Edin., L.R.C.S.Irel., Junior Constitutional Club, Piccadilly, S.W.; 48, South Hill Park, Hampstead Heath.
1887. Stewart, Rothsay C., M.R.C.S., Leicestershire and Rutland Asylum, Narborough, near Leicester.

1905. Stilwell, Henry Francis, L.R.C.P.&S.E., Barnwood House, Gloucester.  
 1899. Stilwell, Reginald J., M.R.C.S., L.R.C.P., Moorcroft House, Hillingdon, Middlesex.  
 1864. Stocker, Alonzo Henry, M.D.St. And., M.R.C.P.Lond., M.R.C.S.Eng., Medical Superintendent, Peckham House Asylum, Peckham.  
 1897. Stoddart, William Henry Butter, M.D., B.S.Lond., M.R.C.S.Eng., M.R.C.P.Lond., Bethlem Royal Hospital, London, S.E.  
 1909. Stokes, Frederick Ernest, M.B., Ch.B.Glasg., D.P.H.Cantab., Assistant Medical Officer, Borough Asylum, Portsmouth.  
 1905. Strathearn, John, M.D., Ch.B.Glasg., British Ophthalmic Hospital, Jerusalem.  
 1903. Stratton, Percy Haughton, M.R.C.S., L.R.C.P.Lond., The Royal Societies Club, St. James's Street, S.W.  
 1885. Street, C. T., M.R.C.S., L.R.C.P., Haydock Lodge, Ashton, Newton-le-Willows, Lancashire.  
 1908. Stuart, Francis Arthur Knox, B.A., L.S.A.Lond., Assistant Medical Officer, West Sussex Asylum, Chichester.  
 1909. Stuart, Frederick J., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Northampton County Asylum, Berrywood.  
 1900. Sturrock, James Prain, M.A.St.And., M.D., C.M.Edin., H.M. Prison, Perth, N.B.  
 1886. Suffern, Alex. C., M.D., M.Ch. (R.U.I.), Medical Superintendent, Ruberry Hill Asylum, near Bromsgrove, Worcestershire.  
 1894. Sullivan, William C., M.D. (R.U.I.), 440, Camden Road, N.  
 1898. Sutcliffe, John, J.P., M.R.C.S., L.R.C.P., Royal Asylum, Cheadle, near Manchester.  
 1895. Sutherland, John Francis, M.D.Edin., Deputy Commissioner in Lunacy, Scotsburn Road, Tain, Scotland.  
 1877. Swanson, George I., M.D.Edin., The Pleasaunce, Heworth Moor, York.  
 1908. Swift, Eric W. D., M.B.Lond., Medical Superintendent, Orange River Colony Govt. Asylum, Bloemfontein.  
 1901. Sykes, Arthur, M.R.C.S., L.R.C.P., Oak Villas, Barkerhouse Road, Nelson, Lancs.  
 1897. Tait, James Sinclair, M.D., L.R.C.P.Lond., F.R.C.S.Edin., L.R.C.P. Edin., D.P.H.Edin., R.C.P.S.Edin., F.P.S.Glasg., Medical Superintendent, Hospital for Insane, St. John's, Newfoundland.  
 1857. Tate, William B., M.D.Aber., M.R.C.P.Lond., M.R.C.S.Eng., Medical Superintendent, Lunatic Hospital, The Coppice, Nottingham.  
 1908. Tattersall, John, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, London County Asylum, Hanwell, W.  
 1910. Taylor, Arthur Loudoun, B.Sc., M.B., Ch.B.Edin., Assistant Medical Officer, Lanark District Asylum, Hartwood.  
 1897. Taylor, Frederic Ryott Percival, M.D., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, East Sussex Asylum, Hellingly.  
 1908. Thomas, Joseph D., B.A., M.B., B.C.Cantab., Northwoods House, Winterbourne, Bristol.  
 1904. Thompson, Alexander D., M.B., Ch.B.Glasg., Fulbourn Asylum, Cambridge.  
 1880. Thomson, David G., M.D., C.M.Edin., Medical Superintendent, County Asylum, Thorpe, Norfolk.  
 1903. Thomson, Herbert Campbell, M.D., F.R.C.P.Lond., Assist. Physician Middlesex Hospital, 34, Queen Anne Street, W.  
 1905. Thomson, James Hutcheon, M.B., Ch.B.Aberd., Powick Asylum, Worcester.  
 1905. Tidbury, Robert, M.D., M.Ch. (R.U.I.), L.M., The Borough Asylum, Ipswich.  
 1901. Tighe, John V. G. B., M.B., B.Ch., B.A.O.Irel., North Riding Asylum, Clifton, Yorks.  
 1900. Tinker, William, M.R.C.S., L.R.C.P. (Travelling.)



1903. Topham, J. Arthur, B.A.Cantab., M.R.C.S.&P.Lond., County Asylum, Chatham, Kent.
1896. Townsend, Arthur A. D., M.D., B.Ch.Birm., M.R.C.S., L.R.C.P., Assistant Medical Officer, Hospital for Insane, Barnwood House, Gloucester.
1904. Treadwell, Oliver Ferreira Naylor, M.R.C.S.Eng., L.S.A., H. M. Prison, Parkhurst, I. of W.
1903. Tredgold, Alfred F., M.R.C.S., L.R.C.P., 6, Dapdune Crescent, Guildford, Surrey.
1902. Trevelyan, Edmund Fauriel, B.Sc., M.D.Lond., F.R.C.P.Lond., M.R.C.S., Assistant Physician to the Leeds General Infirmary, 40, Park Square, Leeds.
1881. Tuke, Charles Molesworth, M.R.C.S.Eng., Chiswick House, Chiswick.
1888. Tuke, John Batty, jun., M.D., F.R.C.P.Edin., Resident Physician, Saughton Hall, Edinburgh; Linden Lodge, Loanhead, Midlothian.
1885. Tuke, T. Seymour, M.A., M.B., B.Ch.Oxon., M.R.C.S.E., Chiswick House, Chiswick, W.
1877. Turnbull, Adam Robert, M.B., C.M.Edin., Medical Superintendent, Fife and Kinross District Asylum, Cupar. (*Late Hon. Secretary for Scotland.*) (PRESIDENT-ELECT.)
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## Part I.—Original Articles.

*The Causes of Insanity, with Especial Reference to the  
Correlation of Assigned Factors: A Study of the  
Returns for 1907.* By SIDNEY COUPLAND, M.D.,  
F.R.C.P., Commissioner in Lunacy.

THE revised scheme of registration put forth by the Medico-Psychological Association three years ago and officially adopted by the Commissioners in Lunacy is a noteworthy attempt to impart greater accuracy and precision to the record of facts relating to the insane. An important feature of this revision was a full and carefully designed schedule, compiled by a special committee, intended to replace the long-established list of the "causes of insanity," which, whilst doubtless reflecting the knowledge of the middle of last century, lacked scientific precision and had become obsolete. The new schedule aimed at greater definiteness, and being framed on the teachings of experience by those most competent to the task, may well be considered to fairly embrace the whole field of ætiological inquiry. It is with the object of showing what may be learnt from its use that I have ventured to lay before the Association the results of a study of the records of the institutions for the insane in England and Wales during 1907—the first year of the adoption of the revised system—in so far as these refer to patients suffering from their *first attack* of insanity.

The number of first attack cases in 1907 was, males 6,035, females 6,202. In a certain proportion of such cases, estimated (<sup>1</sup>) to amount to males 1,208, females 1,214, no causal

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factor could be ascertained or positively assigned. Only one such factor was definitely determined in the cases of males 3,456, females 3,499. The residue—males 2,433, females 2,475, or a total of 4,908 individuals—comprises those whose cases have furnished the material upon which this paper is based, for in each of them inquiry yielded information of two or more of the antecedents enumerated in the schedule.

*The Groups of Ætiological Factors.*

The number of scheduled factors amounts to 46 for the male and 50 for the female sex, and they are grouped under 11 headings, namely :

Group A. Heredity.

- „ B. Mental instability.
- „ C. Deprivation of special sense.
- „ D. Critical periods.
- „ E. Child-bearing.
- „ F. Mental stress.
- „ G. Physiological defects and errors.
- „ H. Toxic.
- „ I. Traumatic.
- „ K. Diseases of the nervous system.
- „ L. Other bodily affections.

The comprehensive character of this list is shown by the fact that not one of the ætiological factors named therein has gone unrecorded, whilst of the number of instances entered under the large Group H only 2 *per cent.* are to be found assigned to other than the specified toxins. Such a result bears testimony to the care and foresight of the compilers.

In order to dispense with a dreary recital of figures, which may more suitably be remitted to an appendix to this paper, I have endeavoured to indicate graphically the proportionate frequency with which the several factors and their groups were found to recur. One of these diagrams (and Table I) represents these ratios amongst all the instances recorded, whether isolated or combined ; the other deals only with those where the factors were associated (<sup>3</sup>). There is not much difference in the general result of the two reckonings, and such as there is may probably be explained by the preponderant recurrence of certain causes owing to their multiple association.

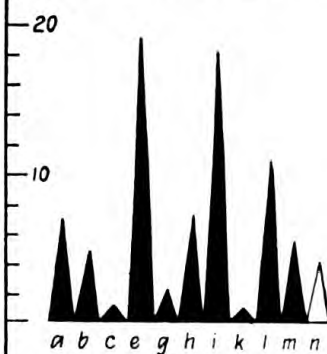


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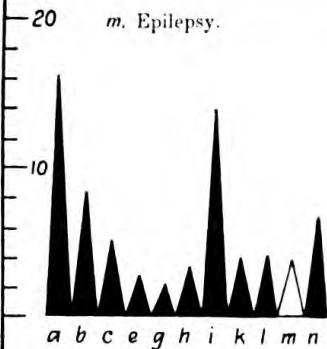


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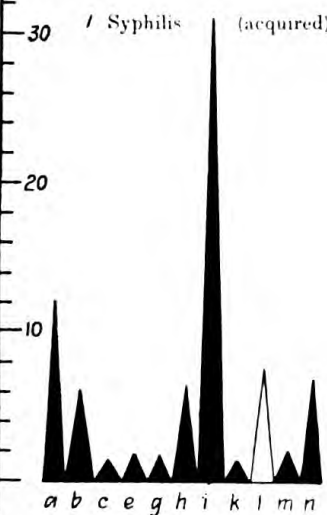
n. Cardio-vascular Degeneration



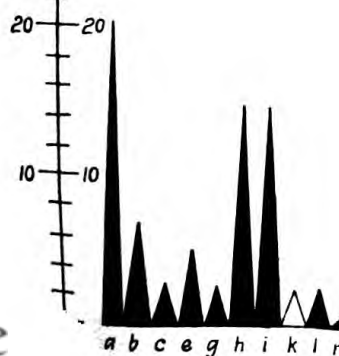
m. Epilepsy.



/ Syphilis (acquired)



k. Influenza





*Table Showing Proportionate Distribution of Groups of Ætiological Factors.*

Group.	All instances (alone or combined).		Combined instances only.	
	Males.	Females.	Males.	Females.
A . . .	20'2	24'2	24'2	27'1
B . . .	2'7	2'8	3'5	3'8
C . . .	0'5	0'5	0'6	0'7
D . . .	9'2	17'4	7'9	14'6
E . . .	—	6'0	—	4'2
F . . .	14'5	18'6	11'3	14'9
G . . .	4'5	3'0	5'2	3'7
H . . .	29'5	11'8	27'5	11'8
I . . .	4'3	1'4	4'05	1'3
K . . .	8'2	6'3	7'1	6'1
L . . .	6'4	8'0	8'65	11'8

Briefly these charts show in the first place that of all the ætiological groups in the male sex the *toxic* is the most frequently met with, whereas in the female it is relegated to the fourth place. Then comes the *heredity* group, which furnished more instances in the female than in the male sex; then *mental stress*, followed by the group of *critical periods*, both considerably more frequent in females. Then *diseases of the nervous system*, *other bodily affections*, and *physiological defects*, which yielded a larger proportion of instances in males than in females. Child-bearing takes the seventh place in women, the *traumatic group* the eighth place in men and the tenth in women, *mental instability* taking the place below *traumatism* in males, but above it in females; and lastly *deprivation of special sense*, which in either sex yielded comparatively few instances, occurring in the full list in the ratio of 5 per 1,000.

#### *The Ætiological Factors.*

The number of instances in which the various factors were met with either singly or in association amounted to 9,831 in males and 10,062 in females. Their relative distribution will be seen in the diagrams, and since it is clearly impossible and would also be unprofitable to deal with each individual item in turn (no small proportion occurring so rarely as to be useless for reliable analysis), I have selected for my purpose the thirteen factors which recur most frequently in the returns.

Taken in the order in which they appear in the schedule, and affixing to each its assigned symbol, they are :

	Males <i>per cent.</i>	Females <i>per cent.</i>
a. Insane heredity (A 1) . . . .	14·2	17·4
b. Alcoholic heredity (A 5) . . . .	3·9	3·9
c. Puberty and adolescence (D 1) . . . .	2·5	3·1
d. Climacteric (D 2) . . . .	0·1	6·4
e. Senility (D 3) . . . .	6·6	7·9
f. Puerperal state (E 2) . . . .	—	3·9
g. Sudden mental stress (F 1) . . . .	2·9	4·9
h. Prolonged mental stress (F 2) . . . .	11·6	13·7
i. Alcohol (H 1) . . . .	17·8	6·7
k. Influenza (H 5) . . . .	2·5	2·1
l. Syphilis (acquired) (H 8) . . . .	7·1	1·0
m. Epilepsy (K 3) . . . .	4·9	3·5
n. Cardio-vascular degeneration (L 2) . . . .	3·1	2·4

The remaining 33 factors amongst the males and 37 factors amongst the females divide between them the 22·8 *per cent.* and 23·1 *per cent.* remaining respectively after the deduction of the above figures.

It will be seen that the predominance of heredity as a factor in the ætiology of insanity is mainly due to the strain of mental derangement in the family, other inherited defects, such as are evidenced by epilepsy or other neurotic manifestations and eccentricity, accounting for only 2·1 and 2·9 *per cent.* in males and females respectively, whilst a history of alcoholism in the family was met with in 3·9 *per cent.* in each category. Similarly in the personal history of the patient by far the most common toxic agency recorded was alcohol, a fact which must of course be set alongside with the vastly preponderant liability of exposure to the effects of this agent over that of any others on the list. It may be of interest to note that the drug habit (H 2) was only recorded in the proportion of 2 and 1 per 1,000 instances in males and females respectively. To judge from these returns sudden mental stress is apparently by no means so liable to unbalance the mind as the wearing influence of prolonged stress, and the mental failure of old age accounts for the fact of senility being the most common of the critical periods of life to be associated with such derangement.

Again, comparing the sexes one finds that there was a higher

proportion of insane inheritance amongst females than amongst males, whilst a family history of alcoholism occurred in exactly the same proportions in each sex. In these returns the critical period of puberty and adolescence was a more disturbing factor amongst females, as also was senility, whilst obviously the climacteric perturbation, well recognised in its mental aspect, was, as a factor in insanity, almost wholly limited to women. That the mental stability of women is less balanced than that of men would further appear from the fact that as regards both forms of mental stress the proportion of instances in which they preceded the attack was higher in the former than in the latter sex. These relative proportions are markedly reversed in the records of personal alcoholic intemperance as a factor in the previous history of the insane, for in the returns its incidence on males was nearly thrice as high as on females, possibly denoting the relative proclivity to such indulgence between the two sexes in general. Influenza occurred in about the same proportion as an antecedent in the two sexes, but acquired syphilis was more than seven times as common amongst the males as amongst the females, a fact which may be compared with a similar disproportion in respect to general paralysis of the insane.

Of the total number of instances recorded about one-third were returned as the sole ascertainable factors in the history of the cases bearing on the insanity, the cases yielding them being nearly half as numerous again as those in which two or more factors were combined. It is possible that as years go by and more penetrating inquiry is made that this proportion of "isolated" causes will tend to diminish. Suffice it to note that of the thirteen selected factors here dealt with the most numerous of such "single" causes was prolonged mental stress, the next alcohol, then insane heredity, senility, and epilepsy, the climacteric and puerperal state in females and syphilis in males being also fairly prominent in the list.

It is not, however, upon the simple question of the relative frequency of assigned causes nor of their possible isolated sufficiency to induce mental derangement that I wish especially to dwell, but rather on the more subtle question of the combination or correlation of two or more factors in the ætiology of insanity, of which the main, if not the sole, object of study must be to discover its bearing on the prevention of



disease. I turn, therefore, to this subject, premising that at the present stage one can do little more than indicate the directions in which inquiry may be most usefully directed.

*The Correlation of Causes.*

The correlation table, if it may be so termed, initiated by the Association and adopted in the Commissioners' Annual Report (63rd Report, App. A, Tables XVII and XVIII), is, I believe, a novel departure in statistical inquiry, and one possessing peculiar interest and value, provided that correct deductions can be drawn from it. It is based on the recognition of the obvious fact that in mental, as in physical disease, many differing conditions or circumstances may co-operate in determining an illness, some no doubt of more importance than others, although not seldom it may be impossible to decide which of many factors has been the most essential to the result. It must, I think, be admitted that there is no warrant for establishing a close parallel between body and mind in this respect. If there were ground for belief in what is at present a pure hypothesis, then it would not be difficult to go farther and accept the assumption that the principal cause of insanity in general is of the nature of a toxæmia, due possibly to a microbe, as was seriously advanced a few years ago in the columns of the *Times* by an anonymous medical correspondent. I perhaps may add that the same thesis was maintained with equal gravity by a lady whom I had occasion to visit in my official capacity, who not only averred that she had seen the microbe of insanity crawling up the walls of the institution, and obligingly, at my request, made me a sketch of it, but declared she had witnessed its contagious influence transmitted from one inmate to another! Even admitting this possibility, there would, however, still remain for inquiry the ascertainment of the circumstances of inheritance, environment, and habits of the individual, which might favour the operation of the essential cause and explain the fact of proclivity. It would be quite analogous to the fact that the ubiquitous *Bacillus tuberculosis* requires for its propagation a favourable soil prepared for it by an inherited feebleness of tissue-resistance, life and work in an impure and sunless atmosphere, defective nourishment, exposure and the like. Therefore, whatever view may be

held as to the essential cause of insanity, it is of the highest importance for its prevention that there should be as accurate knowledge as possible of all the conditions to which the individual has been subjected, which may perchance have contributed to his derangement; and if it can further be shown how these several factors are combined or correlated one with another, the sphere of protection may be more clearly indicated.

It is not unlikely that this line of inquiry would enable us to establish a definite relationship between the character of the precursory circumstances and the type of the mental disorder; but for this purpose a very large collection of data would be necessary. Indeed, I feel that it is somewhat premature to raise the question at all, even in its wider bearings, with only the returns of a single year before one.

The principle upon which the table is drawn up is perfectly simple. It consists merely in a series of columns corresponding to the various scheduled factors, in which the number of recorded instances of each associated factor is indicated. This, which necessarily involves the duplication of the numbers of the latter, enables the calculation to be made as to the proportionate frequency with which any given factor has been associated with any other in the list. The total instances of combination dealt with were males 9,490, females 9,678 (*v.* Table II).

Having utilised for this purpose the several *vertical* columns, the completed analysis supplies a *horizontal* series of ratios indicating the proportionate frequency of correlation of any given factor to the total number in each successive column. Thus (excluding Group D 2 on account of its small total), insane heredity (A 1) amongst males is found to have been associated with 42 other factors, the total number of its correlations being 1,403, the individual items ranging from 308 in the case of one of them to 1 in that of 4, yielding therefore a percentage-rate of 21·3 in the one instance and one of 0·7 in the others. But in the full analysis the 1,403 instances in which insane heredity is in association will show that leading factor to appear in each series in proportions ranging from 28 to 3 *per cent.*, the mean rate of its correlation-frequency being 15·7 *per cent.*

The thirteen selected factors yield the following rates:

*Correlation of Ætiological Factors.*

	Males.*			Females.†		
	Asso- ciated factors.	Total instances.	Mean correlation rate.	Asso- ciated factors.	Total instances.	Mean correlation rate.
a. Insane heredity . . .	42	1403	15·7	45	1612	19·3
b. Alcoholic heredity . .	41	575	5·6	41	578	7·3
c. Puberty and adoles- cence . . . . .	31	267	4·6	36	306	4·1
d. Climacteric . . . . .	—	—	—	36	574	7·3
e. Senility . . . . .	30	473	6·8	31	520	8·3
f. Puerperal state . . . .	—	—	—	32	224	3·0
g. Sudden mental stress . . . . .	32	195	2·7	40	404	4·6
h. Prolonged mental stress . . . . .	41	868	10·6	46	1033	10·3
i. Alcohol . . . . .	42	1497	15·7	44	615	7·9
k. Influenza . . . . .	32	190	2·5	29	172	2·4
l. Syphilis . . . . .	39	674	6·7	29	122	2·0
m. Epilepsy . . . . .	32	375	4·9	32	274	3·7
n. Cardio-vascular de- generation . . . . .	35	454	5·1	37	387	5·1

\* Exclusive of D 2.

† Exclusive of I 3.

The simplest way to indicate the relationship existing between these several factors will be to select those instances where the correlation-frequency rate has surpassed the mean, as pointing to such a combination of antecedents as may possibly be of greater significance than those where the rate is lower than the mean.

Taking them in order and noting as one proceeds wherein the sexes differ in respect to these correlations, it may be observed from the diagrams (and Tables III and IV) that (a) a *family history of insanity* predominated in both sexes in respect to the period of puberty and adolescence, mental stress (whether sudden or prolonged) and influenza. That in the male sex such predominance occurred with a family and personal history of alcoholism and with epilepsy, and in the female sex with the climacteric and puerperal state.

Next we find that (b) an *alcoholic heredity* is associated with a personal addiction to alcohol in both sexes, and also with epilepsy; whilst in males the mean rate is exceeded, notably in association with an insane inheritance, influenza and syphilis, and in females with the puerperal state.

In both sexes the mean rate is exceeded by (c) the period of *puberty and adolescence* when correlated with an insane heredity, sudden mental stress and epilepsy.

The (d) *climacteric* period in women as a predisponent is found to be mainly correlated with insane heredity, mental stress (both sudden and prolonged), alcoholic intemperance and influenza.

(e) *Senility* in each sex was mainly linked, as may naturally be anticipated, with cardio-vascular degeneration, and to a far smaller degree in the female with prolonged mental stress and influenza.

The (f) *puerperal state* is characterised by the preponderance of the factor of heredity, with which may be conjoined an alcoholic heredity and mental stress.

(g) *Sudden mental stress* may be associated with insane heredity and personal alcoholism in males, and to a lesser degree with such conditions as influenza, epilepsy and puberty; whilst in females it was found largely associated with insane heredity, with puberty, the climacteric, the puerpera and influenza.

(h) *Prolonged mental stress* in each sex was correlated with insane heredity, intemperance and influenza, in males also with syphilis; in females with the climacteric and less markedly with senility and the puerperal state.

(i) *Alcoholic excess* in each sex shows marked correlation with prolonged stress, alcoholic heredity, syphilis, and cardio-vascular degeneration, and in women with the climacteric.

(k) *Influenza* has similar marked association with insane heredity, mental stress, the climacteric, and the puerperal state.

(l) *Syphilis* in both sexes was mainly correlated with alcoholism in the subject; in males also with an alcoholic heredity, prolonged stress, and cardio-vascular degeneration.

(m) *Epilepsy* in each sex was chiefly combined with an alcoholic heredity, with adolescence, and with vascular deterioration, and to a lesser degree with an insane heredity.

In each sex (n) *cardio-vascular degeneration* was mainly correlated with senility, and also with alcoholism, syphilis, and epilepsy.

These few selected analyses only bring us to the fringe of the subject, for, as has been stated, the actual numbers of other



factors with which the 13 are really correlated range from 45 to 28, and it may be accepted that in one half or at least one third the correlation frequency rates were above the mean rates. A considerable proportion of the instances recorded are, however, far too few in number to be subjected to comparison, and must perforce be entirely set aside. Nevertheless, some of them may fairly be introduced as they are conditions of importance, and recurred with moderate, if not striking, frequency. I have therefore prepared a list into which 14 additional factors are admitted, and have ranged in order of correlation-frequency (together with those already treated) such of them as yielded a marked correlation with the 13 selected factors. These additional factors were met with in association with others in numbers ranging from 289 to 80, as follows:

	No. of instances.	
	Males.	Females.
Epileptic heredity (A 2) . . . . .	156	190
Neurotic heredity (A 3) . . . . .	130	172
Congenital mental deficiency (B 2) . . . . .	251	289
Pregnancy (E 1) . . . . .	—	80
Lactation (E 3) . . . . .	—	111
Privation and starvation (G 2) . . . . .	177	197
Masturbation (G 4) . . . . .	162	—
Sexual excess (G 5) . . . . .	89	—
Tuberculosis (H 4) . . . . .	93	83
Injuries (I 1) . . . . .	287	—
Lesions of brain (K 1) . . . . .	163	139
Hysteria and allied neuroses (K 4) . . . . .	—	137
Anæmia, etc. (L 1) . . . . .	—	210
Valvular disease of heart (L 3) . . . . .	105	184

In the subjoined list the associated conditions are enumerated in the order of their frequency of correlation with each of the 13 selected factors in turn, the newly introduced ones being indicated by *italics*. The actual figures will be found in the appendix (Tables V and VI). In several series a few further additional factors are given whenever the total of their instances seemed to justify their inclusion.

a. With INSANE HEREDITY: MALES.—1, *Masturbation*; 2, puberty and adolescence; 3, sudden mental stress; 4, prolonged mental stress; 5, alcohol; 6, influenza; 7, *tuberculosis*; 8, *valvular heart disease*; 9, heredity—alcoholism; 10, *injuries*; 11 *epi-*



*leptic heredity*; 12, epilepsy; 13, *sexual excess*. Also physical strain, renal and digestive disorders, and sunstroke.

FEMALES.—1, Puerperal state; 2, *pregnancy*; 3, puberty and adolescence; 4, influenza; 5, *lactation*; 6, sudden mental stress; 7, prolonged mental stress; 8, *tuberculosis*; 9, climacteric; 10, *hysteria*, etc. Also masturbation, physical strain, neurotic and digestive disorders.

b. With ALCOHOLIC HEREDITY: MALES.—1, *Neurotic heredity*; 2, alcohol (personal); 3, *tuberculosis*; 4, epilepsy; 5, influenza; 6, *epileptic heredity*; 7, *congenital mental deficiency*; 8, insane heredity; 9, syphilis; 10, valvular heart disease. Also surgical operations and moral deficiency.

FEMALES.—1, Alcohol (personal); 2, *epileptic heredity*; 3, puerperal state; 4, epilepsy; 5, *lesions of brain*; 6, *congenital mental deficiency*; 7, *neurotic heredity*; 8, puberty and adolescence. Also moral deficiency, neurotic and digestive disorders.

c. With PUBERTY AND ADOLESCENCE: MALES.—1, *Masturbation*; 2, *congenital mental deficiency*; 3, *epileptic heredity*; 4, *sexual excess*; 5, insane heredity; 6, epilepsy; 7, sudden mental stress. Also anæmia, surgical operations, and moral deficiency.

FEMALES.—1, *Congenital mental deficiency*; 2, *hysteria*, etc.; 3, *anæmia*; 4, epilepsy; 5, *epileptic heredity*; 6, insane heredity; 7, sudden mental stress; 8, *tuberculosis*. Also over-exertion, impaired nutrition, moral deficiency, masturbation, and neurosial disorders.

d. With CLIMACTERIC: FEMALES.—1, Prolonged mental stress; 2, influenza; 3, *valvular heart disease*; 4, alcohol; 5, insane heredity; 6, sudden mental stress. Also surgical operations, renal and certain general diseases.

e. With SENILITY: MALES.—1, Cardio-vascular degeneration; 2, *valvular heart disease*; 3, *lesions of brain*; 4, *privation*. Also respiratory, renal, and digestive diseases.

FEMALES.—1, Cardio-vascular degeneration; 2, *lesions of brain*; 3, *valvular heart disease*; 4, influenza; 5, *privation*. Also injuries and respiratory disorders.

f. With PUERPERAL STATE: FEMALES.—1, *Tuberculosis*; 2, insane heredity; 3, *pregnancy*; 4, *neurotic heredity*; 5, *privation*; 6, alcoholic heredity; 7, *epileptic heredity*; 8, *anæmia*. Also malnutrition, neuroses, and toxins.

g. With SUDDEN MENTAL STRESS: MALES.—1, Insane heredity; 2, puberty and adolescence; 3, influenza. Also physical strain, surgical operations, renal disease, anæmia, etc.

FEMALES.—1, *Pregnancy*; 2, *influenza*; 3, *hysteria*, etc.; 4, *puberty*; 5, *insane heredity*; 6, *anæmia*; 7, *climacteric*; 8, *lactation*; 9, *congenital mental deficiency*; 10, *neurotic heredity*; 11, *puerperal state*. Also *physical strain*, *malnutrition*, *neurosos* and *renal diseases*.

h. With PROLONGED MENTAL STRESS: MALES.—1, *Tuberculosis*; 2, *influenza*; 3, *insane heredity*; 4, *neurotic heredity*; 5, *syphilis*; 6, *privation*; 7, *alcohol*. Also *over-exertion*, *renal* and *gastro-intestinal diseases*, and *anæmia*.

FEMALES.—1, *Lactation*; 2, *climacteric*; 3, *pregnancy*; 4, *privation*; 5, *insane heredity*; 6, *neurotic heredity*; 7, *anæmia*; 8, *senility*; 9, *alcoholic heredity*; 10, *influenza*; 11, *hysteria*; 12, *puerperal state*; 13, *alcohol*. Also *over-exertion*, *moral deficiency*, *respiratory* and *general diseases*, and *injuries*.

i. With ALCOHOL: MALES.—1, *Sexual excess*; 2, *syphilis*; 3, *alcoholic heredity*; 4, *privation*; 5, *insane heredity*; 6, *prolonged mental stress*; 7, *injuries*; 8, *cardio-vascular degeneration*; 9, *sudden mental stress*; 10, *senility*; 11, *valvular heart disease*. Also *moral deficiency*, *sunstroke*, *drug habit*, *specific fevers*, *renal disease*.

FEMALES.—1, *Syphilis*; 2, *alcoholic heredity*; 3, *climacteric*; 4, *cardio-vascular degeneration*; 5, *lesions of brain*. Also the *drug habit*, *sexual excess*, *diseases of spinal cord and nerves*, *moral deficiency*, *neurosos* and *renal affections*.

k. With INFLUENZA: MALES.—1, *Epileptic heredity*; 2, *prolonged mental stress*; 3, *tuberculosis*; 4, *sudden mental stress*; 5, *insane heredity*. Also *operations*, *over-exertion*, and *organic diseases*.

FEMALES.—1, *Lactation*; 2, *sudden mental stress*; 3, *climacteric*; 4, *insane heredity*; 5, *senility*; 6, *pregnancy*.

l. With SYPHILIS: MALES.—1, *Sexual excess*; 2, *alcohol*; 3, *privation*; 4, *cardio-vascular degeneration*; 5, *prolonged mental stress*; 6, *tuberculosis*; 7, *lesions of brain*; 8, *alcoholic heredity*. Also *sunstroke*, *fevers*, *malnutrition*, *diseases of spinal cord and nerves*.

FEMALES.—1, *Lesions of brain*; 2, *alcohol*; 3, *epileptic heredity*; 4, *neurotic heredity*; 5, *cardio-vascular degeneration*. Also *moral deficiency*, *sexual excess*, *diseases of cord and nerves*.

m. With EPILEPSY: MALES.—1, *Epileptic heredity*; 2, *injuries*; 3, *congenital mental deficiency*; 4, *neurotic heredity*;

5, senility; 6, cardio-vascular degeneration; 7, alcoholic heredity.

FEMALES.—1, *Epileptic heredity*; 2, *congenital mental deficiency*; 3, *neurotic heredity*; 4, puberty; 5, alcoholic heredity; 6, cardio-vascular degeneration. Also injuries and operations.

n. With CARDIO-VASCULAR DEGENERATION: MALES.—1, Senility; 2, *lesions of brain*; 3, epilepsy; 4, syphilis; 5, privation; 6, alcohol. Also renal, respiratory and nervous diseases, injuries and malnutrition.

FEMALES.—1, Senility; 2, *lesions of brain*; 3, *privation*; 4, syphilis; 5, epilepsy; 6, alcohol; 7, *valvular heart disease*. Also renal and nervous diseases.

Some indication of the relative importance of the above-named conditions as ætiological factors may perhaps be obtained by noting the frequency with which they recur in the several series of correlations. On this basis, heredity,—insane, epileptic and alcoholic, the toxic agent,—alcohol, and sudden mental stress predominate in both sexes, whilst in males privation and tuberculosis, and in females the climacteric and influenza, would appear to be comparatively frequent factors. On the other hand, the least frequent and most restricted in respect to variety of correlation were in both sexes the period of adolescence, in the male sex that of senility, and in the female syphilis and prolonged stress, in spite of the fact of the high total of instances which are recorded under the last-named heading.

A few further comments on the foregoing lists are necessary. The high place taken by insane heredity amongst the males in whom there was a history of *masturbation*, is accounted for by the fact that out of a total of 162 returned under the latter head, no fewer than 48 were in subjects of inherited taint, yielding a relative proportion nearly twice that of the mean rate (15·8). It will be noticed that very many conditions show an excessive rate of insane inheritance, both amongst males and females, the puerperal state, as already pointed out, being in this respect far in advance of any other factor.

*Puberty and adolescence* are naturally to be found largely associated with feeble-mindedness, as with epilepsy in both sexes, masturbation in the male, hysteria and anæmia in the female.

In addition to what has already been pointed out, the *climacteric* perturbation in the history of insanity is found

sometimes associated with the effects of surgical operations and with bodily disorders.

Then as regards *senility*, almost any bodily affection, especially cardiac and cerebral disease, and also privation are correlated conditions, which have certain significance, but one far less than the cardio-vascular degeneration before mentioned.

The high position assigned to *tuberculosis* as an associated factor with the *puerperal state* would be misleading without explanation. It is solely due to the paucity of total instances recorded, namely 83, so that the 5 which are returned as in correlation with the puerpera give a ratio of 6.0 *per cent.*—considerably higher than the mean rate (2.9) of the 32 instances of factors with which the puerperal state is stated to have combined.

*Sudden mental stress* as a factor was apparently more variously correlated with others in proportions above the mean in women than in men, including such conditions as pregnancy, hysteria, anæmia and lactation, but here again the small total makes it doubtful if the position accorded to the first-named is the correct one.

With regard to *prolonged stress*, beyond the 13 factors dealt with previously it will be seen that tuberculosis and lactation again have high positions, which may not represent their real correlation-frequency, and more importance may be attached to the inclusion of privation as a correlated factor.

In addition to the factors already noted, the extended analysis shows that *alcoholism* is also preponderant in respect to its correlation with sexual excess, privation and traumatism in males and in females with brain disease. Its association with neuritis also appears from the figures in these returns.

In males *influenza* was obviously markedly associated with tuberculosis, surgical operations and physical over-exertion, and in females with lactation, pregnancy and neurosal disorders.

*Syphilis* has a predominant correlation with diseases of the central and peripheral nervous system in each sex, and with tuberculosis and privation in males, besides the correlations before mentioned.

The addition of injuries and of surgical operations as factors in high correlation with *epilepsy* is noteworthy.



Lastly, certain bodily diseases, notably of the brain, may be included in the conditions with which *cardio-vascular degeneration* is correlated.

In regard to the correlations that have been thus singled out, it must not be forgotten that they by no means comprise all that could be mentioned in the series dealt with where the correlation-rate was above the mean, but these being in the highest proportion are to be regarded as combinations that are the most likely to recur. But the table does not enable us to ascertain how often groups of more than two particular factors recurred. It is obvious, too, that very many of the associations named are just those which would be likely to occur apart from any question of their influence in producing mental disorder, as will be seen, for instance, in those series in which alcohol and syphilis, youth and age are the leading factors. But apart from such combinations there are others that are more or less novel, and it is perhaps to these that one may look with most hope as enabling an attack of insanity to be ward off by taking measures to protect the individual from their influence.

The factor of inherited taint appears to dominate the whole position, and not the least value of these returns is the demonstration they afford of its influence. Nor is this surprising, since it is quite conceivable that influences operating on the cerebral mechanism which may leave the mind unshaken where there is no such transmitted tendency may, be they severe or slight, transient or lasting, suffice to unbalance it when that tendency exists. The preponderance of alcoholism amongst the toxic factors, especially in males, ought not to be unduly emphasised considering the widespread consumption of alcohol in the community, and the recognised fact that inebriety is probably as frequently concomitant, or consequent, as antecedent to mental defect. Nevertheless it is surely wise to infer from such returns as these that abstinence from this, as from any other intoxicant, in the case of one whose family history shows a possible proclivity to mental or nervous disorder, would be of foremost importance in prophylaxis.

In respect to mental stress, which also stands out so prominently in these records, may I be permitted to express my own conviction that the psychical and emotional states comprised under this phrase cannot be ignored in the ætiology of insanity.



Whatever view may be taken of the meaning and nature of mind, the history of numberless cases, as these records clearly show, do convey evidence of the fact, explain it as one may, that the mind can give way under "strain," as the old phraseology had it; and just as in the case of a toxin like alcohol, so in the case of a less tangible influence, the reason why one individual succumbs under a stress which another easily withstands must be found once more in the inherent, inscrutable, yet necessarily existing quality of cerebral or mental constitution, which neither psychologist nor neurologist has yet been able to appraise or demonstrate.

In venturing to bring before this Association the results of this statistical study I feel bound to emphasise their purely provisional character. I do not think that positive or definite conclusions ought to be drawn from them, and have, therefore, abstained from any such attempt. We must patiently await the accumulated material of many years' careful observation and record before attempting to dogmatise from analogous results. My aim has been far less ambitious. It was to endeavour to awaken interest in the subject of the correlation of causes, and above all to demonstrate the importance of full and accurate records, in order that the collective investigation of these facts may be as complete and thorough as possible. It is difficult, indeed, I should think it very often impossible, to obtain information which can be utilised for this purpose; reticence and evasion in respect to such intimate matters as family disease or personal habits are only too likely to operate when the matter of inquiry is so sinister a one as insanity. We may trust that education will eventually overcome the prejudice that still surrounds the subject, and that many obstacles to the ascertainment of the whole facts may thus be removed.

May I finally mention what must be apparent to all, that every such collective inquiry is imperfect by reason of the very fact that it is collective. No two recorders can be of precisely the same opinion in their estimation of evidence or the import of a fact; there are bound to be differences, not only as to the value of a fact in life-history, but even in such matters as the precise significance to be applied to such terms as "sudden," "prolonged," "intemperance," "privation," and the like. But when due allowance is made for such differences, and when

time has, by the accumulation of data, tended to attenuate those that do exist, we may hope eventually to elicit what we are all seeking—the truth.

### *Appendix.*

The following tables contain all the data upon which the paper has been based. Table I shows the total number of instances in each sex in which separate ætiological factors were returned, including both those which occurred as the sole ascertainable conditions in the history of the case, and those which were in association with one or more other factors. The relative frequency of the occurrence of these factors and their groups is indicated by their percentage distribution, which is also shown in the diagrams. Table II is limited to those factors which were in correlation, the total instances corresponding to the totals of each of the columns in the correlation table (*63rd Report Commissioners in Lunacy*, Tables XVII and XVIII). Tables III and IV give the correlated instances and their relative frequency (correlation-rate) to the total instances of each of eleven and thirteen factors in the male and female sex respectively. These tables are also illustrated in the diagrams, where the unshaded figure in each series indicates the mean rate of correlation of the factor concerned with respect to the total number of groups in which its instances occurred (<sup>3</sup>). Tables V and VI constitute an extension of the same analysis, so as to include for each sex an additional number of factors and their correlations with the selected factors.

(<sup>1</sup>) Precise figures are unavailable; the estimate is based on the ratio of the first attacks to total direct admissions.—(<sup>2</sup>) This diagram has not been reproduced; the detailed figures are given in Table II.—(<sup>3</sup>) These mean rates differ from those given above in the text, as in calculating them it was deemed advisable to exclude all the figures assigned to Group C, owing to their comparative paucity.

RELATIVE FREQUENCY OF CAUSES (OR ANTECEDENTS) OF  
INSANITY (FIRST ATTACKS).

TABLE I.—*Ætiological Factors Alone and in Combination.*

Groups of ætiological factors.	Total instances.		Percentage distribution.	
	Males.	Females.	Males.	Females.
<b>A. Heredity :</b>				
1. Insane heredity (a) . . .	1390	1739	14·2	17·4
2. Epileptic heredity . . .	99	122	1·0	1·2
3. Neurotic heredity . . .	88	135	0·9	1·3
4. Eccentricity . . .	23	49	0·2	0·4
5. Alcoholism (b) . . .	379—1979	387—2432	3·9 —20·2	3·9 —24·2
<b>B. Mental instability :</b>				
1. Moral deficiency . . .	37	28	0·4	0·2
2. Congenital mental deficiency	197	217	2·0	2·2
3. Eccentricity . . .	34—268	36—281	0·3 —2·7	0·4 —2·8
<b>C. Deprivation of special sense :</b>				
1. Smell and taste . . .	—	1	—	—
2. Hearing . . .	20	29	0·2	0·3
3. Sight . . .	26—46	19—49	0·3 —0·5	0·2 —0·5
<b>D. Critical periods :</b>				
1. Puberty and adolescence (c)	248	310	2·5	3·1
2. Climacteric (d) . . .	11	638	0·1	6·4
3. Senility (e) . . .	650—909	797—1745	6·6 —9·2	7·9 —17·4
<b>E. Child-bearing :</b>				
1. Pregnancy . . .	—	97	—	0·9
2. Puerperal state (f) . . .	—	390	—	3·9
3. Lactation . . .	—	122—609	—	1·2 —6·0
<b>F. Mental stress :</b>				
1. Sudden mental stress (g) . .	285	495	2·9	4·9
2. Prolonged mental stress (h) .	1144—1429	1370—1865	11·6 —14·5	13·7 —18·6
<b>G. Physiological defects and errors :</b>				
1. Malnutrition in early life . .	16	15	0·15	0·1
2. Privation and starvation . .	143	178	1·4	1·8
3. Over-exertion (physical) . .	60	62	0·65	0·6
4. Masturbation . . .	162	26	1·6	0·3
5. Sexual excess . . .	66—447	22—303	0·7 —4·5	0·2 —3·0
<b>H. Toxic :</b>				
1. Alcohol (i) . . .	1752	671	17·8	6·7
2. Drug habit . . .	20	13	0·2	0·1
3. Lead and other such poisons .	29	6	0·3	0·06
4. Tuberculosis . . .	82	68	0·8	0·64
5. Influenza (k) . . .	249	208	2·5	2·1
6. Puerperal sepsis . . .	—	24	—	0·25
7. Other specific fevers . . .	41	41	0·4	0·4
8. Syphilis, acquired (l) . . .	697	99	7·1	0·95
9. Syphilis (congenital) . . .	11	11	0·1	0·15
10. Other toxins . . .	32—2913	48—1189	0·3 —29·5	0·45 —11·8
<b>I. Traumatic :</b>				
1. Injuries . . .	332	75	3·4	0·7
2. Operations . . .	30	55	0·3	0·6
3. Sunstroke . . .	57—419	11—144	0·6 —4·3	0·1 —1·4

TABLE I—*continued.*

Groups of ætiological factors.	Total instances.		Percentage distribution.	
	Males.	Females.	Males.	Females.
<b>K. Diseases of nervous system :</b>				
1. Lesions of the brain . . .	197	147	2'05	1'5
2. Lesions of spinal cord and nerves . . .	67	28	0'7	0'2
3. Epilepsy ( <i>m</i> ) . . .	479	350	4'9	3'5
4. Other defined neuroses (hysteria, etc.) . . .	48	106	0'5	1'0
5. Other neuroses in infancy or childhood . . .	5— 796	12— 643	0'05— 8'2	0'1 — 6'3
<b>L. Other bodily affections :</b>				
1. Anæmia, etc. . . . .	25	151	0'25	1'5
2. Cardio-vascular degeneration ( <i>n</i> ) . . . . .	304	244	3'1	2'4
3. Valvular heart disease . . .	77	130	0'8	1'3
4. Respiratory system . . . .	59	40	0'6	0'4
5. Gastro-intestinal system . .	44	59	0'45	0'6
6. Renal and vesical system . .	55	71	0'6	0'7
7. Generative system (excluding syphilis) . . . . .	16	38	0'15	0'4
8. Other general affections, as diabetes, myxædema, etc. . .	45— 625	69— 802	0'45— 6'4	0'7 — 8'0
<b>Total . . . . .</b>	<b>9831</b>	<b>10062</b>	<b>100'0</b>	<b>100'0</b>

TABLE II.—*Combined Ætiological Factors.*

Groups of ætiological factors.	Total instances.		Percentage distribution.	
	Males.	Females.	Males.	Females.
<b>A. Heredity :</b>				
1. Insane heredity ( <i>a</i> ) . . .	1404	1615	14'8	16'6
2. Epileptic heredity . . .	156	190	1'6	2'0
3. Neurotic heredity . . .	130	172	1'4	1'8
4. Eccentricity . . . . .	32	66	0'3	0'7
5. Alcoholism ( <i>b</i> ) . . . . .	575—2297	578—2621	6'1—24'2	6'0 —27'1
<b>B. Mental instability :</b>				
1. Moral deficiency . . . . .	52	37	0'5	0'4
2. Congenital mental deficiency	251	289	2'6	3'0
3. Eccentricity . . . . .	35— 338	37— 363	0'4— 3'5	0'4 — 3'8
<b>C. Deprivation of special sense :</b>				
1. Smell and taste . . . . .	—	2	—	0'02
2. Hearing . . . . .	28	45	0'3	0'46
3. Sight . . . . .	29— 57	22— 69	0'3— 0'6	0'22— 0'7
<b>D. Critical periods :</b>				
1. Puberty and adolescence ( <i>c</i> )	267	306	2'8	3'2
2. Climacteric ( <i>d</i> ) . . . . .	11	576	0'1	6'0
3. Senility ( <i>e</i> ) . . . . .	473— 751	520—1402	5'0— 7'9	5'4 —14'6

TABLE II—*continued.*

Groups of ætiological factors.	Total instances.		Percentage distribution.	
	Males.	Females.	Males.	Females.
E. <i>Child-bearing</i> :				
1. Pregnancy . . . . .	—	80	—	0·8
2. Puerperal state ( <i>f</i> ) . . . . .	—	224	—	2·3
3. Lactation . . . . .	— —	111—415	— —	1·1 — 4·2
F. <i>Mental stress</i> :				
1. Sudden mental stress ( <i>g</i> ) . . . . .	196	404	2·1	4·2
2. Prolonged mental stress ( <i>h</i> ) . . . . .	871—1067	1034—1438	9·2—11·3	10·7 — 14·9
G. <i>Physiological defects and errors</i> :				
1. Malnutrition in early life . . . . .	22	37	0·25	0·4
2. Privation and starvation . . . . .	177	197	1·85	2·0
3. Over-exertion (physical) . . . . .	50	71	0·5	0·7
4. Masturbation . . . . .	162	33	1·7	0·3
5. Sexual excess . . . . .	89—500	30—368	0·9—5·2	0·3 — 3·7
H. <i>Toxic</i> :				
1. Alcohol ( <i>i</i> ) . . . . .	1497	615	15·8	6·3
2. Drug habit . . . . .	21	10	0·2	0·1
3. Lead and other such poisons . . . . .	29	10	0·3	0·1
4. Tuberculosis . . . . .	93	83	1·0	0·9
5. Influenza ( <i>k</i> ) . . . . .	190	172	2·0	1·8
6. Puerperal sepsis . . . . .	—	14	—	0·15
7. Other specific fevers . . . . .	43	46	0·5	0·5
8. Syphilis, acquired ( <i>l</i> ) . . . . .	674	122	7·1	1·2
9. Syphilis, congenital . . . . .	17	16	0·2	0·15
10. Other toxins . . . . .	39—2603	61—1149	0·4—27·5	0·6 — 11·8
I. <i>Traumatic</i> :				
1. Injuries . . . . .	287	69	3·0	0·7
2. Operations . . . . .	34	50	0·35	0·5
3. Sunstroke . . . . .	63—384	8—127	0·7—4·05	0·1 — 1·3
K. <i>Diseases of nervous system</i> :				
1. Lesions of the brain . . . . .	163	139	1·7	1·4
2. Lesions of spinal cord and nerves . . . . .	68	29	0·7	0·3
3. Epilepsy ( <i>m</i> ) . . . . .	375	274	4·0	2·8
4. Other defined neuroses (hysteria, etc.) . . . . .	58	137	0·6	1·4
5. Other neuroses in infancy or childhood . . . . .	8—672	20—599	0·1—7·1	0·2 — 6·1
L. <i>Other bodily affections</i> :				
1. Anæmia, etc. . . . .	34	210	0·35	2·2
2. Cardio-vascular degeneration ( <i>n</i> ) . . . . .	456	387	4·8	4·0
3. Valvular heart disease . . . . .	105	184	1·1	1·9
4. Respiratory system . . . . .	64	63	0·7	0·7
5. Gastro-intestinal system . . . . .	40	45	0·4	0·5
6. Renal and vesical system . . . . .	56	116	0·6	1·2
7. Generative system (excluding syphilis) . . . . .	17	48	0·2	0·5
8. Other general affections, as diabetes, myxœdema, etc. . . . .	49—821	74—1127	0·5—8·65	0·8 — 11·8
Total . . . . .	9490	9678	100·0	100·0



TABLE III.—Combinations of Selected Etiological Factors.

Males.

	a	b	c	e	g	h	i	k	l	m	n	Mean rate.
a. Insane heredity . . . . .	—	103	74	70	54	198	308	39	84	62	32	15.8
b. Heredity, alcoholism . . . . .	103	—	11	17	10	45	151	15	43	32	19	5.6
c. Puberty and adolescence . . . . .	74	11	—	0	9	17	12	6	6	18	4	4.6
e. Senility . . . . .	70	17	0	—	8	50	78	11	11	10	86	6.8
g. Sudden mental stress . . . . .	54	10	9	8	—	5	33	6	6	9	8	2.7
h. Prolonged mental stress . . . . .	198	45	17	50	5	—	169	28	84	15	34	10.8
i. Alcohol . . . . .	308	151	12	78	33	169	—	28	208	52	82	16.2
k. Influenza . . . . .	39	15	6	11	6	28	28	—	7	1	2	2.7
l. Syphilis . . . . .	84	43	6	11	6	84	208	7	—	15	47	5.3
m. Epilepsy . . . . .	62	32	18	10	9	15	52	1	15	—	27	4.9
n. Cardio-vascular degeneration . . . . .	32	19	4	86	8	34	82	2	47	27	—	5.3
Other associated factors . . . . .	380	129	110	132	48	226	376	47	163	134	115	25.2
Total . . . . .	1404	575	267	473	196	871	1497	190	674	375	456	100.0

	a	b	c	e	g	h	i	k	l	m	n	Mean rate.
a. A I . . . . .	—	179	277	14.8	27.5	22.7	20.5	20.5	12.5	16.5	7.0	15.8
b. A 5 . . . . .	7.3	—	4.1	3.6	5.0	5.2	10.1	7.8	6.3	8.5	4.2	5.6
c. D I . . . . .	5.3	1.9	—	0	4.6	2.0	0.8	3.2	0.9	4.8	0.9	4.6
e. D 3 . . . . .	5.0	2.9	0	—	4.1	5.7	5.2	5.8	1.6	2.7	18.9	6.8
g. F I . . . . .	3.8	1.7	3.4	1.7	—	0.6	2.2	3.2	0.9	2.4	1.8	2.7
h. F 2 . . . . .	14.1	7.8	6.4	10.6	2.6	—	11.3	14.8	12.5	4.0	7.4	10.8
i. H I . . . . .	21.9	26.3	4.5	16.5	16.8	19.4	—	14.8	30.9	13.9	18.0	16.2
k. H 5 . . . . .	2.8	2.6	2.25	2.3	3.1	3.2	1.9	—	1.0	0.3	0.4	2.7
l. H 8 . . . . .	6.0	7.5	2.25	2.3	3.1	9.6	13.9	3.7	—	4.0	10.3	6.9
m. K 3 . . . . .	4.4	5.6	6.7	2.1	4.6	1.7	3.5	0.5	2.2	—	5.9	4.9
n. L 2 . . . . .	2.3	3.3	1.5	18.2	4.1	3.9	5.5	1.0	7.0	7.2	—	5.3
All other factors . . . . .	27.1	22.5	41.2	27.9	24.5	26.0	25.1	24.7	24.2	35.7	25.2	25.2
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Percentage Distribution (Correlation Rates).

TABLE IV.—Combinations of Selected *Ætiological Factors*.  
*Females.*

	a	b	c	d	e	f	g	h	i	k	l	m	n	Mean rate.
a. Insane heredity . . . . .	—	104	91	132	96	84	109	276	109	48	10	51	31	197
b. Heredity, alcoholism . . . . .	104	—	22	27	9	22	21	72	79	7	8	17	15	73
c. Puberty and adolescence . . . . .	91	22	—	0	0	4	22	27	2	1	1	17	2	41
d. Climacteric . . . . .	132	27	0	—	0	0	31	109	56	18	6	17	20	73
e. Senility . . . . .	96	9	0	0	—	0	22	65	39	15	3	9	104	69
f. Puerperal state . . . . .	84	22	4	0	0	—	10	24	2	4	1	5	2	29
g. Sudden mental stress . . . . .	109	21	22	31	22	10	—	24	14	14	3	5	12	45
h. Prolonged mental stress . . . . .	276	72	27	109	65	24	24	—	65	20	6	13	29	101
i. Alcohol . . . . .	109	79	2	56	39	2	14	65	—	2	28	19	32	78
k. Influenza . . . . .	48	7	1	18	15	4	14	20	2	—	0	1	3	22
l. Syphilis . . . . .	10	8	1	6	3	1	3	6	28	0	—	4	8	38
m. Epilepsy . . . . .	51	23	17	17	9	5	5	13	19	1	4	—	15	49
n. Cardio-vascular degeneration . . . . .	31	15	2	20	104	2	12	29	32	3	8	15	—	—
Other associated factors . . . . .	474	169	117	160	158	66	117	304	168	39	44	95	114	—
Total . . . . .	1615	578	306	576	520	224	404	1034	615	172	122	274	387	—

	a	b	c	d	e	f	g	h	i	k	l	m	n	Mean rate.
a. A I . . . . .	—	18.0	29.7	22.9	18.5	37.5	27.0	26.7	17.7	27.9	8.3	18.6	8.0	19.7
b. A 5 . . . . .	6.4	—	7.2	4.7	1.7	9.8	5.2	7.0	13.0	4.1	6.5	8.4	3.9	7.3
c. D I . . . . .	5.6	3.8	—	0	0	1.8	5.4	2.6	0.3	0.6	0.8	6.2	0.5	4.1
d. D 3 . . . . .	8.2	4.6	0	—	0	0	7.7	10.5	9.1	10.5	4.9	6.2	5.1	7.3
e. F I . . . . .	5.9	1.6	0	0	—	0	5.4	6.3	6.3	8.7	2.5	3.3	26.8	6.9
f. F 2 . . . . .	5.2	3.8	1.3	0	0	—	2.5	2.3	0.3	2.3	0.8	1.8	0.5	2.9
g. H I . . . . .	6.75	3.7	7.2	5.4	4.2	4.5	—	2.3	2.3	8.1	2.5	1.8	3.1	4.5
h. H 5 . . . . .	17.1	12.4	8.8	19.0	12.5	10.7	5.9	—	10.6	11.6	4.9	4.7	7.5	10.1
i. H 8 . . . . .	6.75	13.7	0.7	9.7	7.5	0.9	3.5	6.3	—	1.2	23.0	6.9	8.3	7.8
k. K 3 . . . . .	3.0	1.2	0.3	1.0	0.6	0.4	0.7	1.9	0.3	—	0	0.4	0.8	2.2
l. L 2 . . . . .	0.6	1.4	0.3	1.0	0.6	0.4	0.7	0.6	4.5	0	—	1.5	—	2.0
m. K 3 . . . . .	3.2	4.0	5.6	2.9	1.7	2.2	1.2	1.3	3.1	0.6	3.3	—	3.9	3.8
n. L 2 . . . . .	1.9	2.6	0.7	3.5	20.0	0.9	3.0	2.8	5.2	1.7	6.5	5.5	—	4.9
All other factors . . . . .	29.4	29.2	38.2	27.8	30.4	29.5	29.0	29.4	27.3	22.7	36.0	34.7	29.5	—
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	—

Percentage Distribution (Correlation Rates).

TABLE V.—Further Combinations of Selected Factors.

Males.

	Epileptic heredity.	Neurotic heredity.	Congenital mental deficiency.	Privation and starvation.	Masturbation.	Sexual excess.	Tuberculosis.	Injuries.	Lesions of brain.	Valvular heart disease.
<i>a.</i> Insane heredity . . . . .	26	14	32	23	46	14	17	49	23	19
<i>b.</i> Heredity, alcoholism . . . . .	12	14	18	5	5	1	8	13	9	6
<i>c.</i> Puberty and adolescence . . . . .	11	3	18	2	35	5	2	4	2	1
<i>e.</i> Senility . . . . .	1	4	6	18	—	—	—	14	24	18
<i>g.</i> Sudden mental stress . . . . .	—	3	5	3	2	—	2	6	2	2
<i>h.</i> Prolonged mental stress . . . . .	10	18	13	22	16	3	14	21	7	8
<i>i.</i> Alcohol . . . . .	20	14	28	42	4	29	15	53	23	17
<i>k.</i> Influenza . . . . .	6	1	4	2	2	1	3	5	2	1
<i>l.</i> Syphilis . . . . .	6	7	13	19	3	15	8	16	14	5
<i>m.</i> Epilepsy . . . . .	33	9	21	2	3	2	—	38	4	—
<i>n.</i> Cardio-vascular degeneration . . . . .	5	3	9	11	1	3	—	14	23	5
Other associated factors . . . . .	26	40	84	28	45	16	24	54	30	23
	156	130	251	177	162	89	93	287	163	105

	A 2.	A 3.	B 2.	G 2.	G 4.	G 5.	H 4.	I 1.	K 1.	L 3.	Mean rates.
<i>a.</i> A 1 . . . . .	16.6	10.7	12.8	13.0	28.4	15.8	18.4	17.0	14.2	18.1	15.8
<i>b.</i> A 5 . . . . .	7.7	10.7	7.4	2.8	3.1	1.1	8.7	4.5	5.5	5.7	5.6
<i>c.</i> D 1 . . . . .	7.2	2.3	7.4	1.1	21.5	5.6	2.2	1.4	1.2	1.0	4.6
<i>e.</i> D 3 . . . . .	0.6	3.0	2.4	10.2	—	—	—	4.9	14.7	17.1	6.8
<i>g.</i> F 1 . . . . .	—	2.3	2.0	1.7	1.2	—	2.2	2.1	1.2	1.9	2.7
<i>h.</i> F 2 . . . . .	6.4	13.8	5.3	12.4	10.0	3.4	15.0	7.5	4.3	7.6	10.8
<i>i.</i> H 1 . . . . .	11.9	10.7	11.2	23.6	2.5	32.5	16.1	18.4	14.2	16.2	16.2
<i>k.</i> H 5 . . . . .	4.4	0.8	1.6	1.1	1.2	1.1	3.2	1.7	1.2	1.0	2.7
<i>l.</i> H 8 . . . . .	4.4	5.6	5.3	10.7	1.9	16.8	8.6	5.6	8.6	4.8	6.9
<i>m.</i> K 3 . . . . .	21.0	6.8	8.5	1.1	1.9	2.3	—	13.2	2.4	—	4.9
<i>n.</i> L 2 . . . . .	3.2	2.3	2.6	6.5	0.6	3.4	—	4.9	14.2	4.8	5.3
All other factors . . . . .	16.6	31.0	33.5	15.8	27.7	18.0	25.6	18.8	18.3	21.8	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Percentage Distribution (Correlation Rates).

TABLE VI.—Further Combinations of Selected Factors.  
Females.

	Epileptic heredity.	Neurotic heredity.	Congenital mental deficiency.	Pregnancy.	Lactation.	Privation and starvation.	Tuberculosis.	Lesions of brain.	Hysteria, etc.	Anæmia, etc.	Valvular heart disease.
a. Insane heredity	27	11	48	27	30	31	20	18	30	38	24
b. Heredity, alcoholism	23	13	22	4	6	11	5	11	6	10	5
c. Puberty and adolescence	11	6	26	—	3	5	4	—	11	15	1
d. Climacteric	10	12	15	—	1	14	3	6	9	8	18
e. Senility	8	3	2	—	—	17	3	24	2	2	19
f. Puerperal state	6	8	4	4	1	8	5	1	3	6	3
g. Sudden mental stress	4	8	15	7	6	2	2	1	10	14	6
h. Prolonged mental stress	9	23	22	14	24	34	7	4	15	27	17
i. Alcohol	13	8	14	2	8	14	5	11	1	5	14
k. Influenza	2	3	4	2	7	1	—	2	1	1	3
l. Syphilis	6	4	4	—	2	1	—	7	1	1	3
m. Epilepsy	23	11	21	2	—	3	3	2	3	5	2
n. Cardio-vascular degeneration	2	3	9	—	2	13	3	17	5	3	9
Other associated factors	46	59	83	18	21	43	23	35	40	75	60
	190	172	289	80	111	197	83	139	137	210	184

	A 2.	A 3.	B 2.	E 1.	E 3.	G 2.	H 4.	K 1.	K 4.	L 1.	L 3.	Mean rates.
a. A 1.	14.2	6.4	16.6	33.8	27.0	15.8	24.1	13.0	21.9	18.1	13.1	19.7
b. A 5.	12.1	7.5	7.6	5.0	5.4	5.6	6.0	7.9	4.4	4.8	2.7	7.3
c. D 1.	5.8	3.5	9.0	—	2.7	2.5	4.8	—	8.0	7.1	0.6	4.1
d. D 2.	5.3	7.0	5.2	—	0.9	7.1	3.6	4.3	6.6	3.8	9.8	7.3
e. D 3.	4.2	1.7	0.7	—	—	8.6	3.6	17.3	1.5	0.9	10.3	6.9
f. E 2.	3.2	4.7	1.4	5.0	0.9	4.1	6.0	0.7	2.2	2.9	1.6	2.9
g. F 1.	2.1	4.7	5.2	8.7	5.4	1.0	2.4	0.7	7.3	6.7	3.3	4.5
h. F 2.	4.7	13.4	7.6	17.5	21.6	17.3	8.4	2.9	11.0	12.8	9.2	10.1
i. H 1.	6.9	4.7	4.8	2.5	7.2	7.1	6.0	7.9	0.7	2.4	7.6	7.8
k. H 5.	1.0	1.7	1.4	2.5	6.3	0.5	—	1.4	0.7	0.5	1.6	2.2
l. H 8.	3.2	2.3	1.4	—	1.8	0.5	—	5.0	0.7	0.5	1.6	2.0
m. K 3.	12.1	6.4	7.3	2.5	—	1.5	3.6	1.4	2.2	2.4	1.1	3.8
n. L 2.	1.0	1.7	3.1	—	1.8	6.6	3.6	12.3	3.6	1.4	4.9	4.9
All other factors	24.2	34.3	28.7	22.5	19.0	21.8	27.9	25.2	29.2	35.7	32.6	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Percentage Distribution (Correlation Rates).

*Alcoholic Insanity (Korsakow's Polyneuritic Psychosis):  
Its Symptomatology and Pathology.* By JOHN  
TURNER, M.B., Senior Assistant Medical Officer, Essex  
County Asylum.

INTRODUCTION.

(1) *Definition of Alcoholic Insanity.*

THERE are certain persons who, having taken alcohol to excess, develop a form of insanity characterised by distinctive features, clinical and pathological. [This is the form which I mean by "alcoholic insanity."]

There is a far larger number of persons in whom various forms of insanity are associated with drinking habits; but these forms present no characteristic features either clinically or histologically, and unless the fact of indulgence in alcohol can be established by inquiries into the personal history of the patient, it would be impossible from a study of the case alone, in my opinion, to adduce alcohol as the causative factor.

It is this larger class which I am unable to look upon as of alcoholic origin in the sense that alcohol was the causative factor.

What are the distinctive symptoms in a case of alcoholic insanity?

In my opinion it is only when a case presents the symptoms described by Korsakow as polyneuritic psychosis that we are justified in asserting that we are dealing with a case of alcoholic insanity. I know that it is generally asserted that Korsakow's disease is only one of the forms by which alcohol displays its deleterious action on the nervous system, and further that Korsakow's disease is not necessarily the result of alcohol.

As regards the first of these points, if it be allowed that alcohol is capable of producing a definite form of insanity, a form which can be diagnosed without a reference to past habits, and which can be recognised after death by characteristic appearances, then in default of these criteria the burden of proving that alcohol may also cause various forms of insanity, which we frequently meet with in persons in whom one can



with certainty exclude this factor, rests with those that make the assertion.

As regards the second, my experience fully bears out Ascherson's (1) statements that "hard drinking has a share in the ætiology of Korsakow's disease in an overwhelming majority of the cases," and "a more careful investigation of the histories of the non-alcoholic cases would only serve to swell the number of the alcoholic at their expense. In typical cases alcohol can never be excluded."

I can recall one case of polyneuritic psychosis in a young woman suffering from pulmonary tuberculosis, apparently, from her own account, a model of propriety and sobriety, and with none of the physiognomical stigmata of alcohol, and unless I had been fortunate enough to obtain from a trustworthy source the true state of affairs, which was a life of drunkenness and immorality, this would have been included under the head of polyneuritic psychosis of non-alcoholic origin, and probably as due to tubercle.

### (2) *The Relationship of Alcohol to Insanity.*

This appears to be of a three-fold nature :

(1) *Coincidental*.—That such a relationship should occur in many cases appears to be unavoidable when we consider the very large number of people who consume alcoholic drinks in some one or another form.

(2) *Sequential*.—The drinking of alcohol in most people produces a momentary pleasurable sensation, followed by a more remote feeling of well-being. So that it can easily be perceived why those in whom the highest inhibitory powers are deficient will be especially prone to over-indulgence. Under this heading come the Jane Cakebreads, who spend their time between the gin-shop and the prison, weak-minded persons or moral imbeciles unable to resist the attractions of alcohol, under the action of which they become a nuisance to the community. With such the alcohol is not the cause of the insanity, but the insanity is the cause of the drinking habits.

(3) *Causal*.—Here the drinking habits produce in certain predisposed cases a series of characteristic symptoms and a specific lesion of the nervous system, and from my point of view unless these symptoms or histological appearances can be

shown one is not justified in labelling every case where over-indulgence in alcohol can be proved as alcoholic insanity.

Numbers 1 and 2 make up by far the larger bulk of the cases in which alcohol is related to insanity, and account for the large percentage of cases of insanity which are wrongfully attributed to alcohol. As a matter of fact, as a causal factor in insanity it plays a comparatively insignificant rôle, 3 to 4 *per cent.* in women, and probably about the same proportion or rather less in men I find in the Essex County Asylum, whilst Dawson (2) puts the percentage of mental disease really attributable to alcohol at about 10 *per cent.*

As regards the various forms which authors describe as alcoholic psychoses, acute hallucinosis, chronic hallucinosis, alcoholic paranoia, and pseudo-paresis, etc., there seems to be very little accord among them as to what constitute diagnostic symptoms. And those which some of them give as such appear to me singularly inadequate.

Chotzen (3) emphasises the difficulty of differentiating the alcoholic psychoses from others of non-alcoholic origin. According to him the diagnostic features in acute hallucinosis are the dominance of aural hallucinations, the absence of hypochondriacal symptoms, and the tendency to recovery. But it is probably within the experience of many who have had a large acquaintance with lunatics that such a combination of characteristics may often arise without alcohol being a direct ætiological factor.

Stoddart (4) describes a chronic hallucinosis, which according to Chotzen is denied by some, at all events, as a sequel of acute hallucinosis. This author also gives as the chief distinction between alcoholic and true paranoia the absence of systematised delusions in the former. None of these varieties, except perhaps some cases of so-called pseudo-paresis, which more probably are cases of polyneuritic psychosis with gross brain lesions the result of arterio-sclerosis, show any characteristic pathological changes, and none, I contend, are capable of being diagnosed as alcoholic in default of a previous knowledge of alcoholic indulgence in the patient. No doubt in all these forms alcohol *may* be the exciting cause, in the sense that it has served to overturn an already tottering nervous system, but what I contend is that it is not a specific but an accidental stress, inasmuch as such cases if subjected to other equally

powerful stresses would develop similar mental disturbances, and therefore there is nothing in the nature of the symptoms or in the pathological anatomy to point specially to alcohol as the exciting cause; whereas in true alcoholic insanity both the symptoms and the pathological anatomy present characteristic features.

In spite of the desire of ardent teetotallers to prove the injurious effect of alcohol on the nervous system, the balance of evidence is in favour of the view that it only in a very small proportion of cases can produce permanent and demonstrable effects on the nervous tissues, although, as is self-evident, it can in anyone induce a temporary interference with the conduction of nervous impulses.

In the majority of drinkers alcohol appears to exert grave toxic effects on other viscera whilst sparing the nervous system. The point of least resistance in most alcoholics is not the brain but the kidneys, the liver, or the blood-vessels.

(3) *Alcohol unable to Initiate Insanity except in Certain Predisposed Subjects.*

This is shown by the fact that although drinking to excess is very common in the community, the percentage of cases which develop insanity under the influence of this stress is very small. Probably not one person in a thousand who drinks to excess develops alcoholic insanity, but if alcohol was by itself an effective toxic agent in this direction then all who indulge in it to excess would suffer. Hence it is obvious that among the cases which succumb to alcohol in the direction of insanity we must seek for another—a predisposing factor.

We may postulate this other factor to be an initial or inborn instability of the nervous system, or in other words a congenital structural defect of this tissue.

When treating of the pathological appearances met with in the brain in cases of alcoholic insanity, I shall point out that in more than half the cases we can demonstrate a form of nerve-cell which with great probability represents immaturity of structure.

The deleterious effects of alcohol are far more liable as previously mentioned to affect other viscera than the brain. To take one instance, whilst outside asylums a certain form of

cirrhotic liver is looked upon as almost pathognomonic(\*) of alcoholic excess, this lesion, as F. W. Mott (5) has pointed out, is very rarely met with in insane alcoholics, so that Mott has asserted that it is only persons with an inherently stable nervous system who can drink long enough to acquire advanced alcoholic cirrhotic liver.

(4) *The Relationship of Delirium Tremens to Alcohol Poisoning.*

It is well recognised that delirium tremens is apt to develop in heavy drinkers after the sudden deprivation of alcohol, and also that it may appear in a case of alcoholic insanity weeks or even months after residence in an asylum. Ascherson (1) refers to the likelihood of symptoms of delirium tremens appearing in a case of Korsakow's disease during the night at any time during the course of the case. Therefore it seems impossible that the toxic effects of alcohol can account for this phenomenon.

Bonhöffer (6), Kraepelin (7) and S. Cole (8) believe that delirium tremens and Korsakow's disease are but different forms of the same affection. There is a good deal to be said for this idea, but as delirium tremens is, as its name implies, an acute delirious condition, whilst alcoholic insanity is not necessarily so and in very many cases runs a chronic course without any acutely delirious episodes, I am disposed to believe (in common with these authors) that delirium tremens is set up by the accumulation of some toxin or toxins not directly alcoholic, but produced and liberated under certain conditions by the injurious effects of alcohol on the general bodily metabolism, forming a common but not inevitable accompaniment of alcoholic insanity in much the same way as the congestive seizures in general paralysis.

Wassermeyer (9) does not favour the view that it is of this nature, but looks upon it rather as an exacerbation of chronic *alcoholic* poisoning.

It should be noted that delirium tremens is liable to occur in cases which do not show any symptoms of insanity. These are cases which lack, I believe, the inherent mental instability necessary for the production of alcoholic insanity.

(\*) From time to time doubts have been expressed as to the causal relation of hob-nailed liver and alcohol. See a letter in *Brit. Med. Journ.*, November 2nd, 1907, by Dr. H. B. Donkin.



The occurrence of high temperature in delirium tremens with no discoverable extra-cerebral cause was described by Magnan and later by Alzheimer (10). I have met with two cases myself. Unless these cases can be looked upon as fulminating forms of polyneuritic psychosis, their existence tends to show that delirium tremens of itself may be a fatal disorder and that it is not necessarily associated with polyneuritic psychosis.

(5) *The Diagnostic Sign of Alcoholic Insanity—Neuritis.*

The dominating features in the cases which I describe as true alcoholic insanity are symptoms referable to an interference with the passage of nerve impulses along the nerve-fibres, either peripheral or central.

To these symptoms I would apply the term "neuritic." Adolf Meyer (11) has already pleaded for an extension of the use of the term to all degenerated conditions with decay of myelin sheaths of any nerve-unit. And for the sake of convenience I have termed all symptoms neuritic which point to an interference in the passage of nerve currents, whether this interference is only temporary and not accompanied by histological changes in the nerve-fibres, or permanent and histologically demonstrable; and also whether it affects the peripheral nerve-tracts (sensory or motor) or the central in the spinal cord and cerebrum up to the highest associational tracts.

From this point of view I maintain that all cases of alcoholic insanity are accompanied by—nay I would add, are the result of—neuritic changes, and from a comparison of the symptoms in alcoholic insanity with those observed transiently in every attack of drunkenness the similarity between the two is easily appreciated, and some further evidence is derived in support of the contention that alcohol is responsible for these symptoms in both cases.

*Similarity between the Symptoms of Drunkenness and the Symptoms of Alcoholic Insanity.*

In the temporary alterations produced in the nervous system during every attack of drunkenness are foreshadowed the more permanent changes which occur in alcoholic insanity. These are, on the physical side:



(1) *Thickness of speech*.—The affected individual's mental sphere may be unclouded and he may be capable of making strong but unavailing efforts to enunciate clearly. This condition indicates that the central apparatus, the nerve-cells probably or the nerve-cell region, is in a condition to function, but that the nerve-cell branches—the nerves—fail to convey the cell impulses. I think we are justified in seeking for an explanation in interference with neural action and not muscular, as we have no data to show that muscle actions under *acute* alcoholic excess are in default, and we see that the involuntary muscles still perform their duty naturally.

(2) *Inco-ordination of gait*.—Here also the symptoms may be well marked at a stage when the mental sphere is relatively unclouded. The subject may be able to correctly appreciate his condition, and to make strong efforts to overcome the failure, but ineffectually. The striking parallelism between this inco-ordination of gait and that which follows as a result of polyneuritis would appear to warrant our regarding both as essentially similar in nature, only in one the interference in the conduction of peripheral impulses is temporary and leaves on its disappearance no discoverable histological alterations; in the other the interference is more or less persistent, and has a definite and demonstrable histological basis.

(3) *General blunting of sensation*.—A later phenomenon which co-exists with or follows the well-known psychical effects of alcohol referred to by some French writers (Chapin, etc.) as psycho-sensory anæsthesia. This phenomenon, including a deadening of sense of fatigue as well as of pain, finds its parallel in the frequency with which anæsthesia or analgesia is found in alcoholic insanity and degenerative changes in the posterior columns of the cord.

(3a) *Muscular hyperæsthesia*.—Hill Buchan (12) notes the frequency with which in the acute stage of an alcoholic attack there is a degree of sensitiveness to pressure in the calves which often passes off in a few days.

(4) On the psychical side the analogy is continued in the silly jocularities of one stage of drunkenness, the irascibility of another, the excessively emotional condition of a third; and the paramnesic troubles of alcoholic insanity find their counterpart in the almost instantaneous forgetfulness which so many drunkards display at some period of their debauch.

This similarity in the symptoms between intoxication and certain forms of insanity in which there is a history of alcoholic excess, is in favour of the idea that alcohol is capable of producing a special form of insanity presenting the symptoms met with in every attack of drunkenness. And further, in the absence of these symptoms, we are entitled to doubt the validity of the claim of alcohol as the causative factor in an attack of insanity merely because the subject can be shown to be addicted to alcoholic excess. We do not recognise special forms of insanity of adverse circumstances, tobacco or puerperal insanity, etc., on the sole ground that these stresses occur in association with insanity affecting a numerous class.

In the same way I desire to eliminate from true alcoholic insanity those cases in which alcohol as the exciting cause has acted merely as a general stress and to include only those cases in which it has been a specific stress, giving rise to characteristic symptoms and characteristic changes in the nervous system.

#### SYMPTOMATOLOGY.

The mode of onset is frequently sudden, that is, after perhaps years given to excessive alcoholic indulgence. Ascherson (1) found this to be the mode in 36 *per cent.* of the cases of Korsakow's disease which he investigated, and he found that in the cases showing multiple neuritis the onset was more frequently gradual, and that the mental symptoms may either precede or follow the neuritis. According to his figures the mental symptoms succeeded the neuritis in 28, developed with it in 21, and preceded it in only 7. In several of my cases signs of *peripheral* neuritis were absent or, at all events, not detected on admission to the asylum, but developed later on, sometimes several months after the total deprivation of all alcoholic drinks. Not infrequently (16.6 *per cent.* according to Ascherson) the symptoms follow directly after an attack of delirium tremens.

Epileptic or epileptiform attacks may precede the mental symptoms or develop during the course of the disease. In 114 cases of mine they were noted in 11 instances (9.6 *per cent.*)—5 times preceding an attack and 6 times during an attack.

Ascherson found the onset was of an epileptic nature in 15 *per cent.* of the 126 cases he collected, and that in 20 *per cent.* an epileptiform attack occurred during the course of the malady.

A. *Physical.*

*Physiognomy.*—As a rule there is a characteristic alcoholic countenance, but although this is familiar to both lay and professional observer, it is very difficult to place the finger on this or that feature which forms or helps to form this type. Apart from expression, the coarse capillary injection of the cheeks and of the nose especially and a somewhat dusky livid hue of the lips are very characteristic of the drinker. The general expression in a great many is one of silly self-satisfaction with a fatuous smile, which may be blended with a look of astonishment. A few, and generally the less typical cases, display an expression of fear or apprehensiveness. I think, perhaps, the most characteristic marks are centred around the mouth muscles; there is a curious looseness and indecision of the lips, and in instantaneous ( $\frac{1}{8}$  sec.) photographs the lower lip, whilst talking, appears blurred owing to a fine tremor, which may often be unappreciable to the unaided eye. Sometimes there is a slight symmetrical ptosis giving a drowsy expression. Asymmetrical conditions in the working of the muscles of expression, especially in the *upper* zone of the face, are common.

The facies of the female subject of alcoholic insanity is much more characteristic than that of the male.

*Gait* is only affected in subjects with peripheral neuritis of the lower limbs, and with these it is unsteady and waddling, with feet widely separated from the middle line, and a great tendency to fall or stumble, especially in the act of turning. With these conditions Rhombergism is almost always present although the knee-jerks may not be absent.

*Deep reflexes.*—Very valuable information is obtained as to the nature of the disease from the state of the tendon reflexes, especially the knee-jerks, and at the outset it may be stated that a case of insanity where the knee-jerks are absent or very slight, without the association of persistent Argyll-Robertson pupils, should always raise a suspicion of alcoholic causation in the mind of the examiner. In 68 of my cases the knee-jerks were present, normally or to an exaggerated degree, in only 21. In the remainder (70 *per cent.*) they were either very slightly marked or absent (in 39, or 57·3 *per cent.*).

In most cases there is a parallelism between absence of knee-jerks and inco-ordination of gait, generally with the accompani-

ment of alteration in the sensation of the lower limbs; but this is a rule to which there are many exceptions. Thus in 13 instances where the knee-jerks were very slight or absent, the gait and sensation were apparently unimpaired. On the other hand, in 21 instances where the knee-jerks were present, in 8 the gait was unaffected, in 10 it was affected, and in 3 there is no note as to its state.

In 9 cases the knee-jerks, absent on admission, gradually returned to a normal condition after admission to the asylum, and therefore after deprivation of alcohol, but in 3 cases a reverse condition occurred. This tends to show that the absence in all cases cannot be directly imputed to the alcohol; probably it may be a secondary result of vascular nature (endarteritis of small arteries?).

In 8 cases the knee-jerks remained after a more or less lengthy residence in the asylum, as on admission, absent, but the gait, which had been affected, became normal. It is not uncommon to meet with temporary alterations, *e.g.*, they may be absent, re-appear, and again disappear.

*Ankle-jerks.*—Dr. R. T. Williamson (13) states that loss of the ankle-jerks is one of the first signs of the injurious action of alcohol on the peripheral nervous system, often disappearing long before the knee-jerks. Since I saw this statement I have from time to time tested all my cases for this symptom, but so far I have notes only concerning 13. In 3 it was absent along with absence of knee-jerks. In 3 it was absent when the knee-jerks were present. In 2 it was present when the knee-jerks were absent. In 4 it was present when the knee-jerks were present, and in 1 case it was present in one foot only when both knee-jerks were slight. These numbers are small, but so far as they go they do not seem to any great extent to coincide with Dr. Williamson's results. Dr. A. Hill Buchan (12), in alcoholic cases associated with neuritis, found the ankle-jerks increased in 4 and absent in 19.

*Pupils.*—My experience quite coincides with Ascherson's (1) results. He found the most common condition was a sluggish reaction to light, and remarks that the special feature of the pupillary disturbance is that it is "transitory and varies much in intensity from day to day; a constant Argyll-Robertson pupil is, in my opinion, never found, and should always lead to a suspicion of tabes dorsalis or general paralysis."



The condition of the pupils in 68 of my cases was as follows :

(1) They were unequal in 26·4 *per cent.*; sometimes the right, sometimes the left was the larger, and sometimes the inequality shifted on different days from side to side.

(2) They reacted either very slightly and sluggishly to light or were rigid in 34·2 *per cent.*, but this condition was in most cases only temporary. Thus in 8 cases where they appeared at one time quite rigid to light the condition was temporary in 6; in 1 it developed after admission, and as the patient was shortly removed to another asylum the further state could not be recorded, and in the last case it was noted on admission, but no further note as to the condition is made in the later reports.

*Sensation.*—Testing for sensation among the insane is always a somewhat difficult and unsatisfactory proceeding, as owing either to mental dulness, defective intelligence, inability to fix the attention, or excitement, there is always uncertainty as to the accuracy of the replies, and this difficulty is most felt, perhaps, in alcoholic cases, associated as they are with amnesic troubles, great emotionality, and a great tendency to untruthfulness. For these reasons the results obtained can only be regarded as approximations to the truth.

The cases were tested for the temperature sense by hot and cold tubes, for light contact by cotton-wool, for ordinary tactile sense by the finger touch, for pain by pricking, and the accuracy with which they could localise impressions was also noted, as also the presence of anomalous subjective sensations. Nothing abnormal was noted in 18 out of 48 cases; in the remaining 30 (60 *per cent.*) some defect was encountered.

(a) The most commonly observed defect was some degree of anæsthesia or analgesia, which was noted in 18 cases.

(b) Hyperæsthesia was noted in 10.

In a few cases where anæsthesia was found at one period, hyperæsthesia was found later on, or *vice versa*.

(c) Subjective sensations such as numbness, formication, pins and needles, or tenderness in the calves were present in 9 cases, and in 2 besides a feeling of pins and needles was met with in the hands only.

(d) The temperature sense was found to be unaffected in all but one of the 21 cases tested, and in this case at one period the cold tube was called hot but the hot tube was



correctly appreciated, but at a later period no anomaly was detected.

(e) The kinæsthetic sense was tested for in only 4 cases and was normal in all of them.

Quinquaud described a sign observed by him in chronic alcoholics in 1893. It is elicited by the patient placing the extended ring and middle fingers so that their tips rest with gentle pressure against the observer's extended palm. During the first few seconds nothing is noticed, but then one feels slight taps as if the bones were striking against one another and the observer's palm.

Fürbringer (14) and Hoffman (15), who investigated the subject among large numbers of people, arrived at fairly concordant results, *viz.* :

(1) That people in whom it is absent are in all probabilities not drinkers in the ordinary acceptance of the term.

(2) In a slight degree the presence of the sign does not justify the assumption of alcoholic abuse.

(3) A strong degree of phalangeal crepitation points with great probability to a drinker (in the proportion of 3 to 1 in the opinion of Hoffmann).

(4) The sign is of more value diagnostically than either tremor of the hands or tenderness of the calf muscles.

(5) It is less marked in women than in men.

Whilst Fürbringer believed that the sounds were produced in the finger-joints, Herz (16) believes that they are occasioned by very slight separations of the digital flexors from their sheaths, the tendons at the same time being in a state of tension.

From my own limited experience of this test among women I am not inclined to attach much importance to it alone, but taken in conjunction with other suspicious signs it may help to form a correct diagnosis in some doubtful cases. Whilst its presence is suggestive of alcoholic abuse, its absence by no means excludes this factor.

In 19 cases of alcoholic insanity I tested for it, usually at different times during the progress of each case; it was absent in 8, well marked in 5, and slightly marked in 6. Sometimes I could obtain it only in one hand, and sometimes on different occasions of testing it would be the right and then the left or *vice versa*. As some of the cases were not tested

till after a more or less lengthy residence in the asylum, varying from a few months to three years, and therefore during all this period without alcohol, the large proportion of cases in whom I failed to get it may not be surprising, but it was well marked in some of those who had been longest here, and on the other hand in a case of delirium tremens it was absent on admission and when tested for twice later on. In some it seemed to vary very capriciously, *e.g.*, it was only slightly marked seven months after admission and absent the following month in one woman who was shortly after discharged. During her absence she drank heavily and was brought back having severely cut her throat ; on re-admission the sign was not obtainable, but four months later it was present in both hands, and again four months later it was absent.

*Blood-pressure.*—According to my experience, which is at variance with Ascherson's on this point, the tendency is for the blood-pressure to be raised, often to a very marked degree ; in some it remains within normal limits and in a small minority it is persistently low. There seems to be no definite relation between the mood and the height of pressure, and the cases in which the mood is continuously euphoric may be associated, and generally are, with extremely high tensions.

This condition of the pressure is only what might be anticipated considering the frequency of granular kidneys, cirrhotic conditions of the liver and thickening of the walls of the blood-vessels, which are so often found at the autopsy in these cases. I have records of the systolic pressure from 26 cases taken daily for a week or fortnight and at different periods in the disease. Twenty-one of these cases were between the ages of thirty and fifty-nine, and in 12 (or 57 *per cent.*) the average pressure was high (above 130 mm. Hg. up to 200 or more). The mood was markedly euphoric in 9 out of these 12 ; in only one was it depressed. In 7 (33 *per cent.*) the average pressure was within normal limits (110 to 130), and the mood was euphoric in 6 of these. In only 2 was the average pressure low (below 110).

In 5 cases sixty or more years of age the average pressure was extremely high in 3 (191, 218, 284) and the mood was euphoric in 2 and depressed in the third. In the remaining 2, considering their age, the average pressure was within the normal limits.

*Blood.*—A differential count of the leucocytes was made in nine typical cases, in each case for fourteen consecutive days. The only difference from the normal standard appeared to be a slight diminution in the number of polymorphs and increase in the number of lymphocytes. But when these results were compared with the differential count in six control cases, taken from apparently healthy and sane women whom I had no reason to suppose were addicted to alcoholic habits, there was found also in these latter a high lymphocyte count, although not quite so high as occurred among the cases of alcoholic insanity. In one only of the nine was the polymorph count increased, varying between 10,000 and 12,000 per c.mm., rising on one day to 20,000. This woman was somewhat anæmic and had been several years in the asylum.

Of the two whose lymphocyte count ranged highest, one had been in the asylum for some years, the other had recently been admitted.

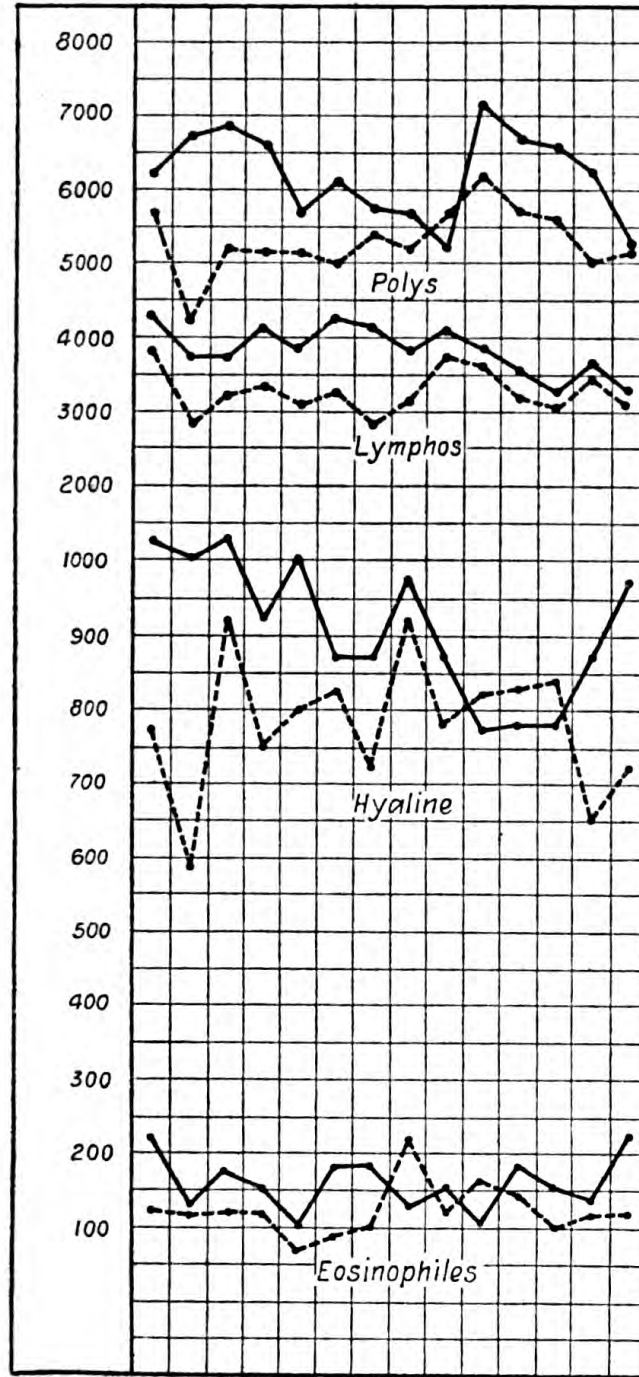
In the annexed chart is shown the average curves in the nine patients (continuous line) and those for the six controls (dotted lines).

The result of these examinations adds no fresh testimony to the view that confusional insanity of alcoholic origin is of an auto-toxic nature ; only one case showed a polymorphonuclear leucocytosis, and that not of a very marked character. The lymphocytosis also when compared with the control cases is too slight to have much significance, even if one were justified in regarding lymphocytosis as evidence of chronic toxic conditions.

*Coagulation-rate.*—In the same nine cases in which a blood-count was made, the coagulation-rate was tested by Wright and Paramore's method ; and taking (at blood-heat) below 130 seconds as a quickened rate and between 130 and 150 as normal, I found that it was slightly quickened in three and normal in six. Lawson (17), who tested the blood in all classes of alcoholic cases, found that in the great majority there was no delay, but in a few cases with wet brain and meningeal symptoms it was retarded.

*Urine.*—So far as my observations go the urine presents nothing specially characteristic in alcoholic insanity ; it is generally pale and with low specific gravity and contains a trace of albumen in 57 *per cent.*, but this percentage, although

CHART I.



it looks high, is not more than has been noted among the insane generally. Ascherson found a trace of albumen in only 12 *per cent.* of his cases. The peculiar orange colour described by Leopold Levi, and which this observer ascribes to an excess of urobilin, Ascherson only found twice. French writers appear to lay great stress on this character. I do not find any mention of it in my notes, and, as I have just said, in the great majority of cases the colour is pale.

The *cerebro-spinal fluid* does not appear to show any characteristic changes, but, so far as I know, too few cases have been examined on this point to speak dogmatically. Wassermeyer records two cases where negative results were obtained, the fluid being very clear and without lymphocytes. In two cases of delirium tremens he found a slight opalescence but no lymphocytosis. In two cases of mine, also, the fluid was quite clear, devoid of cells, and, in fact, showed no departure from the normal.

#### B. *Mental.*

The three cardinal symptoms are :

- (1) Loss of memory.
- (2) Disorientation to place, time and persons.
- (3) Confabulation or pseudo-reminiscence,

and if these, or at all events the first two, are not present at one time or another in the course of a case, one should be very chary of diagnosing alcoholic insanity. Of very great diagnostic significance also are the peculiarities of mood displayed by subjects of this form of insanity.

I shall examine briefly these four symptoms in the order named.

*Loss of memory.*—This is chiefly for recent events, and according to Ascherson and others the defect usually coincides with the duration of the patient's illness; it is antero-grade as it is called, and it is active, *i.e.*, facts continue to be forgotten so fast almost as they are acquired, and a very characteristic sign of alcoholic insanity is shown by the inability of patients to remember the date, which they have just been told and made to repeat. If they do not instantaneously forget, it is only necessary to divert their attention momentarily by plying them with some other question. They cannot tell a few hours after



what they have had for dinner, or what their occupation was the previous day, or earlier in the present. They cannot find their way about the building, or their own beds, months or even years after residence in the asylum, and if asked to perform some duty, probably forget all about it on their way to carrying it out.

Wehrung calls attention to the fact that in Korsakow's disease (and he is speaking of the disease following alcohol), *total* amnesia never occurs and isolated remnants of normal memory are found.

In a very large number of cases the defect ultimately, after a period varying from a few months to years, improves, or may even apparently altogether disappear; and also it should be noticed that the defect may vary from day to day, so that on some days it is difficult to detect, whilst on others it is very pronounced. These peculiarities, besides serving to differentiate it from the quite similar defect often noted in aged people, senile amnesia, also point to the affection being at first a functional one, although the small proportion of cases which completely recover shows that it eventually takes on an organic character, the length of time required for this change varying in very wide limits in different cases. As Ascherson points out, this condition of affairs coincides with the morbid anatomy of the disease.

*Disorientation in time and place or mental confusion.*—The patients have no idea where they are or whence they came; they cannot say how long they have been in the asylum, and although they may only have come the preceding day, will tell you that they have been there three or four months. Ofttimes they cannot specify even approximately the time of day, and will be talking of going to bed shortly after they have arisen, or clamouring for their mid-day dinner late in the evening. The disorientation as to place varies very much in different cases: some imagine they are in a hospital or parish infirmary, but in cases where the symptom is more marked they imagine themselves to be still in the place from which they have just come, or think they are still in their own home and speak of having to get their husband's dinner ready. Ascherson likens this disorientation to a state of stupor or pathological sleep, or rather to a very prolonged state of awakening from sleep.

*Paramnesia-confabulation or pseudo-reminiscence.*—I have

notes of it in 42 out of 70 cases (60 *per cent.*), but it was probably present in a larger proportion, for it is a symptom very liable to be overlooked unless specially inquired for, and I find that in my earlier cases which were not so strictly tested for this point it is much less frequently noted than in the later cases. Ascherson regards it as an essential feature of the malady, and although he only records it in 70 *per cent.* of the 126 cases he collected, says that he has rarely seen an instance of the disease in which it was absent.

Judging from my notes it most frequently takes the form of erroneous accounts of recent visits to various places, or long detailed accounts of shopping the day before, or allusions to visits paid to public-houses, when the patient is very likely in bed and unable to walk. References to having performed the household duties that morning or the preceding day, getting meals ready and attending to the children are very common.

Wehrung limits the term "pseudo-reminiscence" to the recalling of imaginary events arising in conversation, when there occurs to the patient some picture which he proceeds to identify as an actual past experience—confabulation to the fabrication which a patient uses to bridge over awkward gaps in his memory.

It is very difficult to draw a sharp line of demarcation between pure confabulation and ordinary delusions or hallucinations. I can recall one case who, lying in bed and able to enter into a connected conversation, would occasionally rap on the wall, call out in a loud voice, "Shop!" and then ask for "half a quartern of whiskey, please." This difficulty is further exemplified by the morbid ideas relating to sexual or maternal instincts. No less than eleven women out of seventy (nearly 16 *per cent.*) had erroneous ideas that they had babies or children in bed with them, or that their husbands had been in bed with them during the night and had just got up. All such instances seem to me to partake largely of the nature of confabulation, although they are generally classified under delusions.

Several hypotheses have been put forth to explain the disordered nervous mechanism underlying paramnesia. Korsakow suggested that owing to enfeeblement of mental power, external impressions received and stored up in the memory cannot be fully retained, but that traces of them remain; the association formed from these traces of memory, themselves imperfectly

made, when again brought before consciousness in an act of recollection constitute a false reminiscence.

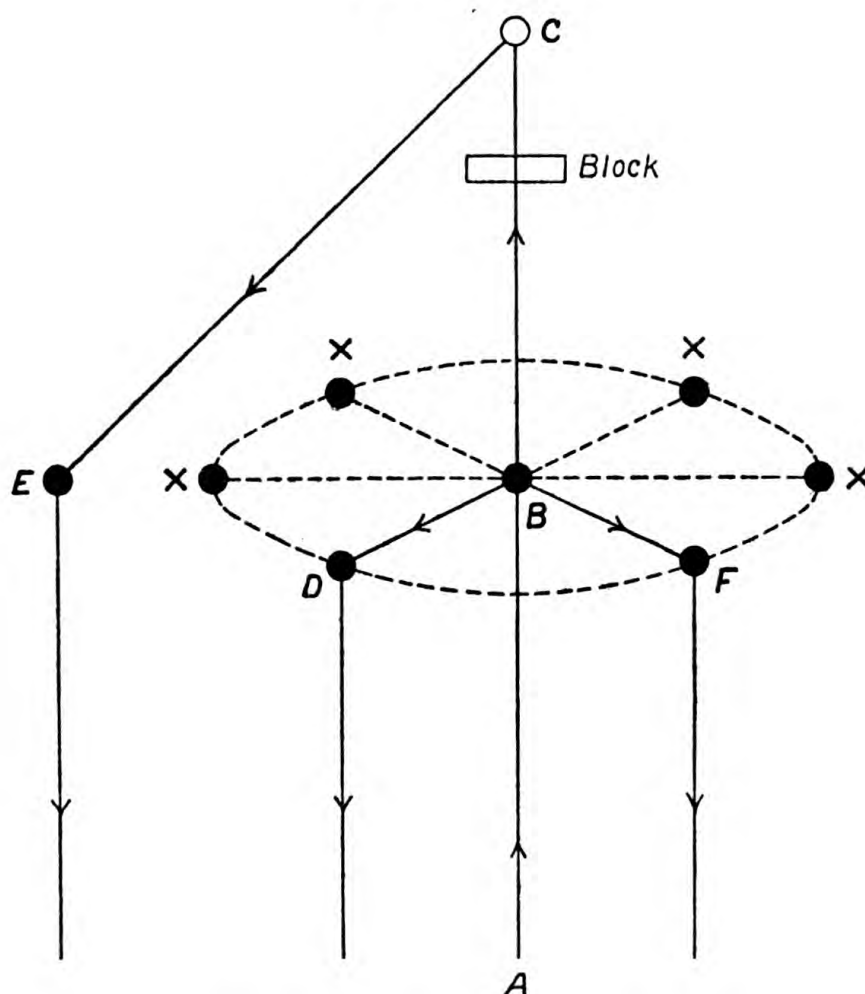
Ascherson's explanation is as follows: "The stimulus afforded by an impression from without alters the constitution of those neurons which subserve the processes of ideation in such a way that a free communication is opened up for the passage of impulses from one of them to another; thus an association of ideas takes place and a concept is made. If the original stimulus be sufficiently strong, it at the same time incites into action certain higher neurones, whose function is to control and inhibit ideation, and through the control so exercised communications are established only between a certain fixed number of the lower neurons, and a limit is placed upon the kind of association formed; but if the original stimulus is not strong enough to rouse the function of these higher neurons, there is nothing to guide the impulses along any definite paths, and either too few or too many communications between the lower neurons are opened up. The associations formed are therefore too scanty or too numerous and the ideation faulty. These communications made at the time between the lower neurons constitute paths of least resistance for future mental operations; therefore when a recollection subsequently takes place it is a false one. The fundamental fault is a failure of power, in this instance of power to control or to inhibit the association of ideas."

In accordance with my belief that the essential nature of the lesion in alcoholic insanity is a blocking or impediment in the passage of impulses along nerve-fibres, I venture to put forth an explanation based on this assumption and on McDougall's (19) theory of inhibition by drainage. If we postulate that there is an obstruction in the channels of communication between the lower and higher neurons which Ascherson refers to (or possibly between the higher neurons themselves), it will result that an impulse arriving at the lower neurons finds its further course upwards impeded by the obstruction before mentioned, and it will tend consequently to spread along other paths than those along which it normally does, and thus fresh association paths are opened up and new and false concepts ensue.

This explanation differs from both the preceding inasmuch as the fault is assumed not to lie in want of power in the initial

impulse, but to an impediment in its course towards the higher neurons. The following diagram will perhaps serve better than long descriptions to make my meaning clearer. The dark circles *D*, *E*, *F*, *B*, *X*, etc., represent a series of neurons on a

CHART 2.



lower level, and the clear circle *C* one on a higher level. The impression from without sets free an impulse which normally spreads to *D* and up to *C*. Although there are paths of communication with all the other neurons, yet because these paths represent channels of greater resistance the impulse has originally taken the path mentioned leading to *D*, and each repetition of the impulse renders the resistance less and less along this tract, and the path becomes more and more organised. The

higher neuron *C*, which for the sake of clearness is represented alone and which has communications on all sides like the lower, sends an impulse to the lower neuron *E*, because, as will be explained further on, this happens to be the one which offers least resistance, and the ultimate result of the impression is to set up impulses along the efferent channels *E* and *D*, which subserve the production of a normal concept. But supposing there is a block in the channel between the upper and lower neurons, then the impulse, instead of spreading upwards, flows along the path of next least resistance to the neuron *F*, which it discharges, and the final results of the impression in this case are impulses flowing along the efferent channels *D* and *F*, which subserve the production of an abnormal or false concept.

The theory of inhibition by drainage allows us to form a conception why the initial impulse from *B* takes the path to *D* rather than the other paths open to it. We must suppose that *D* has recently been discharged, and during this process it drains energy from all its branches towards the outgoing impulse along its axon, but this necessitates the lowering of the resistance in (amongst others) the channel between *B* and *D*. So that when *B* is discharged the impulse tends to spread along the channel to *D* rather than along the other channels open to it. And the same line of reasoning shows why a certain amount of its energy is directed towards the higher neuron *C*, and why from *C* a certain amount is sent to *E*.

The theory of inhibition by drainage supplies the only physiological explanation which can at present be given to the process of association, and it reduces all associations to examples of association by contiguity.

*Conduct and peculiarities of mood.*—One half of my cases presented euphoria, those in whom it was well marked displaying by their beaming expression and tendency to laugh at everything their condition of entire self-satisfaction. Jocularly, if one may use the word as a convenient one to express a frame of mind which is continually, in season or out, pouring out silly and vulgar jokes and primed with all the popular catch-words and phrases of the moment, is common, combined with extreme garrulity. These cases are at the same time highly emotional and easily moved to tears. Many are very irascible, and apt on slight provocation to become rude, impudent and abusive. It should be mentioned that occasion-



ally the euphoric mood is a late development, and may not appear till some weeks or months after admission to the asylum. Such cases may at the onset be acutely melancholic or in a dull, heavy, lethargic condition. Finally there are some who, although of a morose and sullen aspect, will often surprise one by displaying a cynical humour of no mean quality. It is true that the great majority of cases do not give any special trouble in the asylum; they can generally attend to their personal wants. They are neat and show considerable aptitude for work; but nevertheless I cannot agree with Ascherson that there is nothing in their conduct to justify their being certified as insane. I am strongly of opinion that asylum and prolonged treatment (in default of adequate special inebriate homes) is the very best thing for them, as it certainly is for their unfortunate relatives or offspring, and that they are in every sense of the word certifiable lunatics. I would define a lunatic, or at all events a certifiable lunatic, as anyone who is more or less persistently and perniciously out of harmony with his environment. And by the latter term I include all those whose general conduct is prejudicial to themselves or to the community.

All cases of alcoholic insanity come within the scope of this definition. No one disputes the validity of a certificate which consigns a person to an asylum solely because such a one is actively suicidal. Much more, then, should there be no cavilling at certificates which consign to an asylum persons suffering from a form of mental disorder, not only harmful to themselves and to their property, but demoralising to all those with whom they have to live; and a disorder which, unless so treated, will almost inevitably go from bad to worse, resulting in untold misery to children or other relatives, and not improbably injury or death to the subject. Ascherson refers to the depressing and demoralising effect of asylum treatment. I cannot speak on these points, because, notwithstanding a fairly large experience of these cases, I have seen neither. And although he considers that suicide is not likely to be apprehended, one of the most determined suicidal patients I have known was the subject of alcoholic insanity.

Although, as Ascherson remarks, in many cases there appears to be a speedy restoration to sanity, at all events as regards their behaviour, yet persons who are quickly discharged are

almost sure to relapse when again exposed to temptation. The histories which are often forthcoming in these cases show how pernicious such people become when not properly looked after, and the demoralising influence they must exert on young children especially, in my opinion, would over-ride any supposititious demoralising influence which asylum surroundings could exert on the subjects of this disease.

Psychiatric hospitals which Ascherson advocates for the treatment of this complaint do not at present exist in England, and if they did I do not believe they would lend themselves for the favourable treatment of alcoholic insanity. The only chance in my opinion to get lasting good results, and it is at best a very slender one, is prolonged detention in an asylum or inebriate home.

Before concluding this section on the symptomatology of the disease I may add that Serbsky (20) has pointed out an important characteristic which, according to him, serves to differentiate Korsakow's disease from other illnesses with like symptoms, and this is the retention of the patient's character and personality.

#### MORBID ANATOMY AND PATHOLOGY.

One of the earliest, at all events among English authorities, to deal exhaustively with the pathological anatomy of alcoholic insanity was Bevan Lewis. It is evident, however, from his clinical description of the disease that his conclusions are largely based on cases which do not accord with the definition given in the first part of this paper, and therefore, as is to be expected, they do not to a large extent tally with the results that others have obtained in Korsakow's psychosis nor with my own observations.

Dr. Bevan Lewis (21) lays great stress on glial proliferation (scavenger cells) in the first and lower layers of the cortex. The brunt of the affection according to him falls on the nerve-cells of the lower pyramidal and polymorphic layers, and takes the form of fatty degeneration, especially of the apices and dendrites. He records an increase of nuclear elements around the cells and vessels; atheroma and fatty changes in the intima, small aneurysmal dilatations and plugging of the lumen with emboli, and believes that the initial lesion is a vascular

one—"an extensive endarteritis of a most chronic and insidious character."

In the spinal cord it is in the region of the posterior columns that changes are most manifest; these are increased vascularity, thickening of vessel walls and collections of amyloid bodies. The sclerotic change takes the form of a circular investment "originating in its investing membranes and creeping inwards along the vascular tracts, and especially along the posterior median *raphé*."

He regards the fatty changes in the nerve-cells as a more acute process, and the sclerotic as the result of a much slower and more gradual poisoning of the tissues.

Cole (8) has made a most careful and complete examination of the nervous system, muscles, heart, etc., in three cases of Korsakow's disease. My results are practically in accord with his, so that it will be unnecessary to quote from his description, except on points in which his more thorough examination included parts which I omitted to study.

I have examined the nervous system, liver and kidney in twelve cases of the disease, and although my observations in individual cases are much less complete than Cole's, they cover a wider range of cases, and if on this account alone possess a value which observations, however thoroughly made on a very limited number of cases, lack.

The naked-eye inspection of the brain shows, as a rule, nothing of special interest. In eight cases there was more or less marked atrophy, generally along the vertex and sometimes implicating the parietal and frontal lobes in their entirety. The membranes appeared natural to the naked eye in seven; in the other five there was slight opacity over the sulci, but in no case was there adhesion to the cortex. The membranes of one of the cases which appeared natural to the unaided eye showed under the microscope endarteritis of its vessels.

The basal vessels were healthy in nine, atheromatous in two, and calcified in one.

The routine microscopical examination of the cortex was made from sections taken from the topmost part of the ascending frontal, including the paracentral lobule. The tissues were fixed in absolute alcohol, embedded in paraffin and stained (in the earlier cases) by toluidine blue or Unna's polychrome blue. But in many cases sections from other parts of the



FIG. 1.

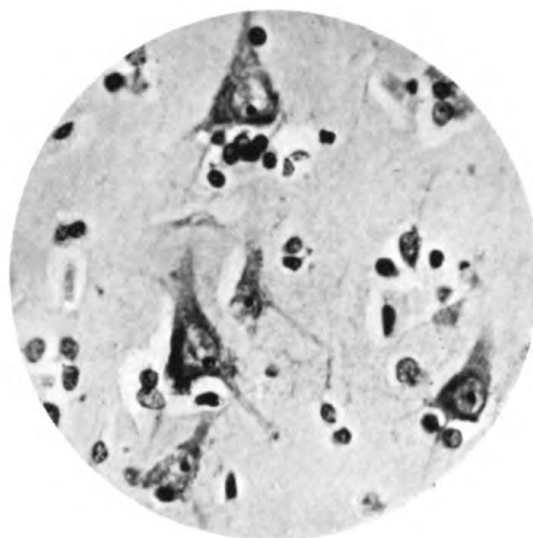


FIG. 2.



FIG. 3.

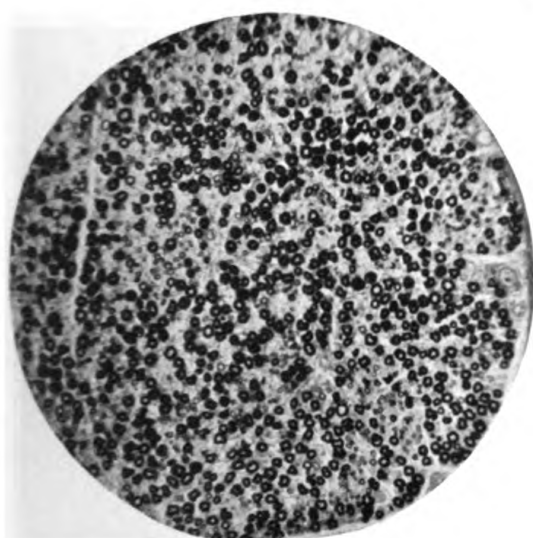


FIG. 4.



FIG. 5.





cortex and from the cerebellum were also examined, and in five cases the cortex was treated by a modified Marchi method for changes in the tangential and other cortical and medullary fibres, and for showing the presence of fatty degeneration in the nerve-cells.

The ordinary Nissl preparations of the cortex show nothing characteristic, not even the condition of the Betz cells or the proliferation of nuclei around the nerve-cells and vessels. To discover the lesions especially associated with alcohol we must, I believe, examine sections treated by methods which reveal changes in the myelin sheaths, and we must carry out our observations over a large area of the brain to get constant positive results, because sometimes one area and sometimes another is affected.

Meynert's striæ are not interfered with. The first or outer layer in seven cases showed a small spider-cell proliferation, but not to anything like the extent either as regards numbers or size of cells to that which is commonly seen in general paralysis or cases of terminal dementia. In the sections stained by osmic acid the body of these small cells was usually found to be filled with small black stained (fatty) globules, and there was either a marked diminution or total absence of the myelinated tangential fibres. The second layer in five cases appeared natural, the cells well formed and in good numbers, but in one of these five some sections stained by osmic acid showed that these apparently healthy cells were in a state of well-marked fatty degeneration (Fig. 1). This is not, however, a general peculiarity in alcoholic cases, as other cases similarly treated failed to show any such degeneration, and it is commonly found in non-alcoholic toxic cases, *e.g.*, acute delirious mania. In the remaining seven cases changes were visible in the toluidin blue or polychrome sections, which took the form of shrinking and uniform dark staining with paucity in number. Such changes, however, if one may judge from a single case stained by osmic acid, were not associated with fatty degeneration. The pyramidal cells (third layer) do not show any marked structural changes, except where prolonged pyrexial conditions or probable secondary toxæmic infection complicates the cases. They are, however, often (six out of eleven of my cases) beset with numerous little cells in their pericellular spaces (see fig. 2). These little elements, the free nuclei, satellites or neuronophages

of different authors, differ in size and general appearance; many appear to be free nuclei, round or oval, densely stained and 5 or 4  $\mu$  in diameter; many have a small quantity of cytoplasm of a square or oblong shape attached to one side of the nucleus, which stains with polychrome of a faint pinkish tint (best seen by artificial light). The nuclei of these latter cells are often somewhat larger and paler than the free nuclei, and may show definite chromatin dots arranged around the periphery or scattered irregularly throughout the nucleus. These in all probability represent lymphocytes, and perhaps immature forms of plasma-cells. A third variety is characterised by a much larger (7 to 9  $\mu$ ) and clearer nucleus with a distinct nucleolar dot and well-defined rim of cytoplasm. These I am inclined to regard as endothelial nuclei, although, perhaps, some of them represent the mesoglia cells of Ford Robertson.

*The Betz cells.*—Changes corresponding in appearance to a state of axonal reaction were found in 7 of my 12 cases, and in 2 out of 4 cases of delirium tremens. S. Cole found similar changes in all 3 of his cases, and they have been observed by Gilbert Ballet, Faure, Babinski, Chancellay, and others. Their absence has been noted by H. W. Miller (22) in a case in which a similar change was present in the anterior horn cells. Cole believes the change is brought about by the selective action of secondary toxins. I (23) previously supposed that it was a genuine axonal reaction secondary to neuritic changes in the pyramidal tracts.

My further observations, however, on large numbers of all forms of insanity lead me now to believe that both these assumptions are incorrect. I find (over 300 cases) that a similar form occurs in 42 *per cent.*; 70 *per cent.* in epileptics, 60 *per cent.* in imbeciles (not epileptic), a similar proportion in cases with marked melancholic symptoms, and only 20 *per cent.* in general paralytics, and I have elsewhere stated my reasons for regarding this form of cell as one indicating a condition of defective development—an immature cell.

In my 12 cases of alcoholic insanity it was found in 7, or 58 *per cent.*, a proportion therefore lower than it is met with among epileptics, imbeciles, and melancholic cases, but higher than the general average.

This form of change was also found in the anterior forehorn cells in 2 of the 9 cords examined, and in both of these

it was only noted in the region of the lumbar enlargement. The lower proportion here is quite in accord with my findings concerning this form of cell in insanity in general, namely, that it is much less commonly found in the fore-horn cells than in the Betz cells.

The first 5 of my cases in which the cord was examined for tract degeneration gave results which seemed in favour of the view that the change was an early condition of axonal reaction, for in the 3 cases where degeneration was found in the pyramidal tracts the Betz cells showed this change, and in the 2 where no degeneration was found in the pyramidal tracts the Betz cells did not show the change. In the 4 following cases, however, although pyramidal tract degeneration was absent in all, 2 of the brains showed the change in the Betz cells and 2 did not.

The strongest point against this being a true axonal reaction is the comparatively early stage of what would constitute an axonal change that they show in cases where it is known that the pathological conditions are of old standing. When we get a severance of the axon, as by hæmorrhage into the centrum ovale, in the course of fourteen or fifteen days the Betz cells have passed into an advanced stage of alteration and are shrunken, very pale, with no chromatoplasm, and a very small shrivelled nucleus. So that it seems reasonable to expect that an equivalent picture of advanced cell alteration would be met with if a similar pathological condition (*viz.*, destruction of the axons) was at work in these alcoholic cases; although the probability must be borne in mind that an interference in the continuity of the axon or its destruction remote from the cell, as by pyramidal tract degeneration, may be followed by slower and perhaps slighter changes than by a lesion of the axon close to the cell. The experimental work on the production of axonal reaction has been chiefly done by plucking out or cutting through the axons of the hypoglossal nerve quite close to its cells of origin, and in hæmorrhage into the centrum ovale the lesion also would be quite close to the origin of the axons of the Betz cells. I know that years after amputation of a limb this change has been shown in the half of the cortex corresponding to the limb movements, but the interpretation which has been put on this coincidence may need qualification when it is seen how commonly a similar change is found in the absence of amputation.

The characters which constitute the immature form are large, globose or swollen cells, with a finely granular condition of the central chromatoplasm, whilst that in the dendrites, the apex, and around the periphery of the cell-body retains its usual character of large spindle-shaped bodies. The nucleus is almost invariably displaced, lying either quite high up near the apex or against one side of the cell, but it otherwise appears to be in a normal condition. When we meet with cells of this kind in which the structure of the nucleus is affected, so that it is either small or crenated, dense or with ruptured membrane, it is an indication that the immature cell has fallen a victim to a super-imposed pathological change, and equally so if the entire cell-body is small and of a pale ground-glass-like aspect and the dendrites attenuated and lacking their normal Nissl bodies, or if the whole cell-body and branches stain deeply.

Although I believe that in the great majority of alcoholic cases the axonal-like condition of the Betz or fore horn cells is really an immature condition, the possibility must be admitted that in those cases where morbid changes affecting the axons of these cells are present, they may represent a real axonal change. I am unwilling, however, to allow that degenerative changes in remote parts of the axon are always effective in producing axonal reaction in the particular cells whose axons are affected. A reference to the table on p. 56 shows that of the 9 cases where the cords and generally the posterior tibial nerves were examined, in no less than 4 cases (Nos. 2, 5, 6, and 7) there was no correspondence between the incidence of axonal-like cells in the cortex and cord, and changes in the pyramidal tracts or posterior tibial nerves. Cole also, it may be mentioned, refuses to allow that the change is secondary to an axis-cylinder affection.

In only 2 of my cases was the immature form uncomplicated by added morbid modifications ; in one other, whilst on one side the form was pure on the other it was not. And the most common change found superadded to the initial defect of structure was the darkly stained form which I described many years ago as common in cases of acute delirious mania. This was found in 6 cases. In 2 cases the cells were in the condition termed by Nissl "acute cell change" and by Marinesco "coagulation necrosis."



It has been asserted that the darkly stained cell referred to above is also in this condition, but there is no justification for such an assertion. In the experimental work on the production of coagulation necrosis by subjecting animals to a high temperature we in all likelihood get a pure form of this change, uncomplicated, that is, by additional pathological factors, and as Goldscheider and Flatau (24), two pioneers in this line of research, show in their coloured plates and description, the change is unaccompanied by any signs of dark staining. The chromatoplasm forms into finer and fewer grains and loses to a large extent its affinity for the stain, so that the cell appears paler than normal, and finally the entire cell-body and even the nucleus is stained a dull pale uniform blue or lilac (with polychrome). When as the result of pathological conditions generally, but not always, associated with high fever, we find coagulation necrosis in the human nerve-cells, a similar picture is presented to that described in animals, but if, as sometimes happens, they not only show an entire disappearance of visible chromatoplasm but also stain deeply, we have here in all likelihood evidence that the morbid conditions giving rise to this state of affairs are not simply those necessary to produce coagulation necrosis, but that in addition other and probably toxic factors are at work.

In the change, however, which I termed dark staining of the nerve-cells, and which occurs so often in these alcoholic cases, the whole character of the alteration is distinct from coagulation necrosis, and in cells which prior to the alteration possess normal Nissl bodies, these structures remain, so far as can be seen, intact; the dark staining affects the between substance, and may, and does, obscure the chromatoplasm, but there is no appearance at any stage suggesting a disintegration or solution of it. The nucleus of the cell is increased in density up to complete homogeneity with nearly black staining, and at the same time it is shrunken generally in proportion to its density. The cells in which prior to the dark staining change, there has been a deficiency of tigroid substance, as in immature forms, when they become affected will of course show no appearance of Nissl bodies in the darkly stained areas where it was originally deficient, but they will be found apparently intact, but obscured in the apex, dendrites, and periphery of the cell-body. This darkly stained condition of the Betz cells was



also found in one (perhaps two) of the four cases of delirium tremens.

Dehio has described a dark staining of the nerve-cells in experimental alcoholic poisoning (acute) in animals.

A large excess of pigment is often found, and in sections stained by polychrome it usually appears of a bright yellow colour, but in sections stained in osmic acid it generally colours nearly or quite black, and is then probably of a fatty nature.

The polymorphic cells show no constant or peculiar structural changes, but around them is an even greater collection of satellite cells than around the pyramidal cells.

*Glia.*—In none of the cases (excepting the very moderate proliferation noted in a few cases in the first layer) was there any increase in the glia. This corresponds with Cole's experience, but is markedly at variance with Bevan Lewis's findings—a discrepancy which I attribute to the inclusion among his cases of many in which alcohol was only a coincidental or sequential occurrence.

*Vascular changes.*—In 4 out of 11 there was a notable increase in the perivascular cells. In 5 out of 11 the cortical arteries were thickened and in 2 of these endarteritis was noted. In 3 there were small cortical hæmorrhages.

Before leaving the brain I may mention that two Italian observers (25) have recorded an alteration of the corpus callosum in alcoholic subjects; the morbid process seemed to be one characterised mainly by degeneration of the myelin sheaths, with formation of granular cells and proliferation of neuroglia, the axis cylinders being in greater part preserved.

Montesano (26) noticed plasma-cells in four cases in rabbits given up to 12 c.cm. of absolute alcohol diluted with water, but C. Reichlin (27), repeating these experiments, was not able to discover them, and as this absence of plasma-cells agrees with the findings of Nissl, Alzheimer, etc., he believes that an intercurrent affection must have caused the death of Montesano's animals. I have never seen typical plasma-cells in human brains from alcoholic cases, although one often comes across cells which may well be early stages in a condition toward plasma-cells, and which I believe to be lymphocytes.

The spinal cord was examined in nine cases. The condition of the fore-horn cells has already been alluded to, but it may

be further mentioned that in eight certainly, and probably in all nine, there was a marked accumulation of pigment which stained black with osmic acid and was probably of a fatty nature. In neither of the two cases of delirium tremens in which the cord was examined was any of this pigment observed. In five of the cases there were no signs of tract degeneration. In the other four there was both recent and old degeneration of the exogenous fibres of the posterior columns, most marked in the lumbar region in two, most marked in the cervical in one. The pyramidal tracts were degenerated in three.

The posterior roots were degenerated in two, in one of these in the intra-medullary region only, and the anterior roots were degenerated in the intra-medullary region in one. On this point of Marchi reaction in the roots Cole utters a warning against the appearance being due to *post-mortem* damage, which is very likely to occur in the intra-medullary part. It is interesting to note that in the two cases where the lumbar fore-horn cells showed an axonal or immature character, in one the tract degeneration of the posterior columns was most marked in the lumbar region and there was intra-medullary (? artefact) Marchi reaction in the anterior roots. In the other the tract degeneration in the posterior columns was least marked in the lumbar region. In both cases the pyramidal tracts were affected.

*Nerves.*—I examined the posterior tibial nerves in seven cases and in all but one there was evidence of disease, patches throughout the cross-section showing a marked disappearance or even entire absence of myelin fibres (Figs. 3 and 5). In one of the two cases where the popliteal nerves were also examined the change was found to be much more marked in the more peripherally situated posterior tibial than in the more centrally situated popliteal. In two cases where marked changes were found in the posterior tibials, the median was in one unaffected and in the other showed very slight changes. In a subacute case recorded by Cole, he similarly found marked fibrotic atrophy in the posterior and anterior tibials and much less change in the arm nerves. In an acute case he records intense acute degeneration (Marchi reaction) with multiplication of the neurilemma nuclei in leg and arm nerves and slight affections in the left phrenic.

The following table correlates the state of the knee-jerks

with the changes found in the posterior tibial nerves and spinal tracts in the nine cases examined :

No	Knee-jerks.	Axonal-like Betz cell.	Axonal-like fore-horn cells.	Neuritis.	Changes in spinal cord tracts.
1	Absent	Present	Lumbar only	Present	Marked recent degeneration in posterior columns and slighter changes in pyramidal tracts.
2	Absent	Absent	Absent	Present	Marked degeneration in posterior columns only.
3	Absent	Absent	Absent	Not examined for	No tract degeneration.
4	Absent	Present	Lumbar only	Not examined for	Marked degeneration of posterior columns and pyramidal tracts.
5	Absent	Present	Absent	Not examined for	No tract degeneration.
6	Exaggerated	Present	Absent	Present	Slight degeneration in posterior columns and pyramidal tracts.
7	Well marked	Present	Absent	Present	No tract degeneration.
8	Normal	Absent	Absent	Not examined for	No tract degeneration.
9	Exaggerated	Absent	Absent	Absent	No tract degeneration.

It will be observed that in two cases an exaggerated or well-marked condition of the knee-jerks was associated with extensive old neuritis ; on the other hand the general tendency is for absent knee-jerks to be associated with changes in the exogenous fibres of the posterior columns.

*Spinal ganglia.*—Several (five or six) of the cervical and lumbar spinal ganglia were examined in three cases :

(1) Associated with well-marked degeneration of the exogenous fibres of the posterior columns the chief change noted in the cells was that resembling axonal reaction—marked central chromatolysis ; the cells were plump but pallid, nucleus eccentric. In the Nissl preparations not much pigment was noted in the larger cells, but with osmic acid they were found to contain a rather large amount of nearly black (? fatty) pigment. The small cells were heavily pigmented, this pigment showing in the Nissl preparations. There was marked proliferation of the connective-tissue covering of the nerve-cells and many clumps of small dark cells, representing probably the sites of degenerated nerve-cells. In the Marchi preparations

there did not appear to be any degenerative changes in the myelin fibres either within the ganglia or at either pole, nor did the anterior roots appear affected, but vacuolation of the cells was noted.

(2) Also associated with posterior column degeneration the ganglia cells were affected but in divers ways ; some showed axonal characters, many were shrunken (especially in the cervical ganglia) and darkly stained and distorted ; some were loculated and with invading nuclei which appeared to have partially destroyed them. The cells were heavily pigmented, this pigment appearing of a nearly black colour with osmic acid. There were many collections of dark nuclei representing probably the sites of degenerated ganglia cells. Marchi preparations showed no degeneration in the myelin fibres.

(3) This case was not associated with tract degeneration in the cord. The majority of the cells were plump, closely fitting their connective-tissue coverings ; they were very pale, with only a few scattered grains of chromatoplasm and no peripheral ring of flakes. The nucleus was pale, sometimes crenated, and appeared as if solid ; it was central and surrounded by a wide perinuclear space. There was a large amount of pigment. The small cells were paler than normal and with general chromatoplasm. No vascular or connective changes were noted.

*Liver.*—In 6 of the cases the liver was cirrhotic, and in 2 of these it had a typical hob-nailed form. In one of the cases of delirium tremens it was cirrhotic. Marked fatty infiltration was ascertained in 2 by microscopic examination, and was probably present in 2 others which were not examined microscopically. Endarteritis was present in 1.

*Kidneys* were granular or showed evidence of more or less marked interstitial changes in 8, and it should be observed that none of the 4 in which this organ was stated to be healthy were subjected to microscopical examination. In all 4 of the cases of delirium tremens they appeared natural, but only one of these was examined microscopically.

Very marked endarteritis was noted in 2 of the cases of alcoholic insanity.

*Heart.*—Excessive deposition of fat was noted in 2. In 8 the aorta was atheromatous (but in 3 only to any marked degree). Cole found, microscopically, fatty degeneration of the



heart muscle in 2 of his 3 cases, and noted also in 2 cases extensive fatty degeneration without loss of transverse striation of the voluntary muscles.

*Pathology.*

The only distinguishing feature in the pathological anatomy of alcoholic insanity appears to be degenerative changes in the nerve-fibres, peripheral and central. I have given reasons which tend to show that the condition of the Betz and anterior horn-cells, on which considerable stress has been laid by previous observers, has no direct relation to either alcohol or to the secondary toxins which its abuse may engender in the system. The accumulation of free nuclei or satellite cells around the nerve-cells and also in the peri-adventitial spaces is also in no wise peculiar to this form of insanity, although it may reasonably be regarded as a response on the part of the leucocytes, the adventitial or glia elements, whichever they may be, to a toxin either directly alcoholic or more probably a secondary toxin, the result of a general perversion of metabolism. The fatty degeneration of the nerve-cells and the dark staining may also probably be similarly accounted for.

The neuritic lesion is evidently, as Cole points out, a degeneration of the nerve-fibre and not an inflammatory condition. He, however, believes that the primary changes are the result of pathological processes "which partially impair the vitality of the whole neuron, leading first to decay of its remotest parts," and that these changes are due not directly to alcohol, but to secondary toxins, and he points to the changes noted in the large nerve-cells as an evidence of this change in the neurons.

I would suggest that alcohol itself exerts a prejudicial effect, not primarily or necessarily on the cell bodies, but on the myelinated branches of specially susceptible nerve-cells. The almost universal opinion of physiological chemists now is that alcohol has invariably a paralysing influence on the nervous system (Schmeideberg, Binz, Bunge, Dixon, etc.). As Bunge (28) puts it, "the stimulating action which alcohol appears to exert on the psychical functions is also only a paralysing action." The cerebral functions first to suffer are judgment and reason, and as a consequence emotional life comes into free play unhampered by the guiding strings of reason." These results



appear to me to be best explained by the view that the paralyzing influence is exerted on the nerve-fibres and not on the nerve-cells (see p. 43 and diagram). This prejudicial effect may be exerted directly on the nerve-fibre, or perhaps by a vicious combination of alcohol with the myelin sheaths or perhaps by both combined. I am led to this conclusion by the absence of any constant or characteristic lesion in the cells themselves, and to the frequency with which in the presence of well-marked neuritic changes one fails to discover any morbid character whatever in the nerve-cells. But although I regard this to be the essential and primary lesion, I believe that subsequently in the course of the disease secondary toxins come into play to complicate the pathological process, and that these are essential for the onset of delirium tremens. But the alcoholic lunatic is no exception to the rule which obtains in all other cases of so-called acquired insanity: he is born, not made.

This hypothesis harmonises with the clinical features of alcoholic insanity better than the idea of a primary change in the nerve-cell body itself. In a large majority of cases rapid improvement up to a certain point occurs after admission to an asylum and therefore immediately following deprivation of alcohol; but in a certain proportion there are anomalous features about some of the symptoms, such as alterations in the knee-jerks and the accession of delirium tremens some time after admission to an asylum, which point to the interaction of a morbid agency other than alcohol.

And, moreover, in regard to the relationship of the axonal-like Betz cells and the neurotic lesions, if, as some hold, the cell change is a genuine axonal reaction, we should expect to find evidence of lesions in the pyramidal tracts in all the cases where this form of cell occurs, and equally, if the cell change were due, as Cole and others believe, to a toxic action directly exerted on the cell body, we should expect to find secondary changes in the axons forming the pyramidal tracts; but these conditions are not fulfilled, and often where we find affected cells we find no evidence of change in the medullated axons, and *vice-versâ*. And on both suppositions we are driven to invoke another morbid agency to account for either the cell or fibre changes, a disadvantage which is avoided by the assumption that the appearances observed in the cells are not

the result of acquired morbid agencies, but of an inborn defect in the cerebral structure.

A more extended examination of the spinal ganglia than has hitherto been made will be necessary before we shall be in a position to make definite assertions as to the relation of the changes in the posterior columns of the cord and the cells of the spinal ganglia. In my three cases the evidence, so far as it goes, would seem to show that there is *some* connection, for in the two cases where the cells showed axonal-like characters there was found a degeneration in the exogenous fibres of the posterior column, but in the third case where the cells did not show this character the posterior columns were intact. But after experimental division of the posterior roots, although according to Köster (29) palpable changes are found in the cells of the ganglia, these do not take the form of axonal reaction.

Although I cannot claim to have shown that neuritic changes were present in all my cases of alcoholic insanity, seeing that 4 out of 12 failed to show any evidence of this nature in the parts examined, yet as alcohol seems to be very capricious in the selection of the part it will affect, and in view of the generally positive results following more extended investigation of the tissues, I am inclined to impute my failure to a lack of thoroughness in the histological examination. Thus in no less than 3 of my negative cases the peripheral nerves were not examined. Wehrung, in this connection, states that neuritis has been found in *all* the cases (Korsakow's disease) in which it has been looked for.

Many other views have been advanced to account for the pathogenesis of polyneuritic psychosis. Korsakow himself attributed the disease to the action of noxious substances in the blood allied to Bouchard's poisons.

In the opinion of the French school it is due to an auto-toxin arising from hepatic inadequacy, especially when there is also an interference with the renal functions. Ascherson unfavourably criticises this latter view, because he only found *clinical* evidence of liver affection in 64·5 *per cent.* of cases and definite cirrhosis in 16 *per cent.*, and the kidneys were sufficiently affected to cause albuminuria in only 20 *per cent.*, and symptoms pointing to joint lesions of both in only 16 *per cent.* But of his cases only 5 came to autopsy, and among these the liver was cirrhotic in 2, fatty in 2, and normal macroscopically

in 1; the kidneys were fatty and cloudy in 1, granular in 1, and healthy in 3. In reference to Ballet's contention that hepatic inadequacy sufficient to give rise to mental symptoms may exist in the absence of macroscopical changes in the liver, he cites a case of Korsakow's disease in which the liver was found to be healthy both to the naked eye and the microscope, and in which the kidneys were but slightly diseased. These are weighty objections, but they appear, with the single exception of the last quoted instance, to rest entirely on macroscopical examination. Unfortunately I only made microscopical examinations of the liver and kidney in 6 of my cases, but in all these the liver was found to be affected (in 4 cirrhotic and in 3 also fatty), and in 5 the kidney showed interstitial changes, and in 1 only it appeared natural. Of the remaining 6 in which the liver and kidney were not examined by the microscope, in 2 both organs appeared healthy; in one the liver appeared healthy, whilst there was evidence of interstitial changes (adhesions of capsule) in the kidney. In 2 the liver was cirrhotic (hob-nailed) and the kidneys granular; in the remaining 1 the liver had appearances indicating fatty changes and the kidneys were cystic. So that in no less than 10 (83 *per cent.*) there were appearances of disease in these organs either separately or conjointly. In my opinion even where a microscopical examination of a tiny piece of such a large organ as the liver fails to show any change, to conclude therefrom that the organ in its entirety is healthy is a very bold assumption. S. Cole, in all three of his cases, also found changes in these organs; fatty infiltration or degeneration and cirrhosis of the liver; fatty changes alone or in combination with slight interstitial changes in the kidneys, although in two of the cases this organ appeared natural to the naked eye.

Wehrung supposes that in Korsakow's disease there is the production of an antitoxin the result of prolonged alcoholic abuse, and he attributes the delay which so often occurs after a bout of drinking before mental symptoms appear to the time occupied for the neutralisation of the alcohol by the antitoxin; only when this is accomplished can the excess of antitoxin exert its own influence upon the cortical structures. Tansi (31) practically adopts this view in discussing the cause of delirium tremens, but in the opinion of Hertz (quoted by Tansi) it is the result of renal insufficiency—a symptom of alcoholic nephritis.

Bonhöffer (30) in all cases of polio-encephalitis hæmorrhagica superior (by which term Wermeke in 1881 described certain paralysees of the eye movements, accompanied by delirium, with acute onset and fatal termination, the symptom-complex arising on the basis of chronic alcoholism), found neuritis and amnesia (Korsakow's disease). But he believes that alcohol alone is insufficient to cause the occurrence of the syndrome and that there is *always* an additional toxic cause, and that the syndrome in the great majority of cases is ushered in by delirium tremens.

According to him senile and arterio-sclerotic changes often produce the syndrome in a very pure form, but here it is preceded by apoplectic or minor attacks. He finds it also (but rarely) in general paralysis.

## REFERENCES.

- (1) Ascherson, W. L.—“Mental State in Alcoholism,” *Mott's Archives of Neurology*, iii, 1907. [In this paper will be found a good bibliography up to date.]
- (2) Dawson, W. R.—*Dublin Journ. of Med. Science*, 1908.
- (3) Chotzen, F.—*Arch. f. Psych.*, 1906; *Centralbl. f. Nervenhe. u. Psych.*, 1907.
- (4) Stoddart, W. H. B.—*Mind and its Disorders*, 1908.
- (5) Mott, F. W.—*Archives of Neurology*, iii, 1907; *Brit. Med. Journ.*, 1907.
- (6) Bonhöffer.—Quoted by Ascherson.
- (7) Kraepelin.—Quoted by Ascherson.
- (8) Cole, S. J.—*Brain*, 1902; *Archives of Neurology*, ii, 1903.
- (9) Wassermeyer.—*Arch. f. Psychiat. u. Nervenkrank.*, 1908.
- (10) Alzheimer.—*Centralbl. f. Nervenhe. u. Psych.*, 1904.
- (11) Meyer, Adolf.—*Brain*, 1901.
- (12) Buchan, A. Hill.—*Review of Neur. and Psy.*, 1905.
- (13) Williamson, R. T.—*Lancet*, 1907.
- (14) Fürbringer.—*Deut. med. Woch.*, 1904.
- (15) Hoffmann and Marx.—*Berlin klin. Woch.*, 1905.
- (16) Herz.—*Münch. med. Woch.*, 1905.
- (17) Lawson, G. B.—*New York Med. Journ.*, 1909.
- (18) Wehrung.—*Arch. f. Psych.*, 1905.
- (19) McDougall, W.—*Brain*, 1903.
- (20) Serbsky, W.—*Arb. a. d. Neurol. Institut. a. d. Wien. Univ.*, 1907.
- (21) Bevan Lewis.—*Text-book of Mental Disease*.
- (22) Miller, H. W.—*Amer. Journ. of Insanity*, 1904.
- (23) Turner, J.—*Journ. of Mental Science*, 1903, 1907, and 1908; *Brit. Med. Journ.*, 1900.
- (24) Goldscheider and Flatau.—*Anatomie der Nervenzellen*, 1898.
- (25) Marchiafava, E., and Bignann, A.—*Riv. di patolog. nev e ment.*, 1903.
- (26) Montesano, J.—*Centralbl. f. Nervenheil. u. Psych.*, 1907.



- (27) Reichlin, C.—*Riv. Speriment di Fren.*, 1908.  
 (28) Bunge.—*Phy. and Path. Chem.*, translated by Wooldridge, 1890.  
 (29) Köster.—*Neurol. Centralb.*, December, 1903.  
 (30) Bonhöffer.—*Allg. Ztschr. f. Psych.*, 1904.  
 (31) Tansi.—*Text-book of Mental Disorders*, translated by Ford Robertson and Mackenzie, London, 1909.

## EXPLANATION OF PHOTO-MICROGRAPHS.

FIG. 1.—Nerve-cells in the upper part of the third (pyramidal) layer from frontal convolution, in a state of fatty degeneration.  $\times 600$ . Notice also the breaking up of the myeline fibres into a beaded condition. The section from which this photo-micrograph was taken was from a case of acute delirium not of alcoholic origin, but precisely similar appearances are met with in alcoholic cases.

FIG. 2.—Large pyramidal cells from the ascending frontal convolution in a case of alcoholic insanity. To show the marked increase of satellite cells around the nerve-cells ( $\times 400$ ). Many, if not all, these bodies represent mesoglia cells, and by special methods their cell-body and branches can be shown, the latter to a large extent embracing the body of the nerve-cells.

FIG. 3.—Longitudinal section of the right posterior tibial nerve in a case of alcoholic insanity, showing recent degeneration of the myeline, which is darkly stained and broken up into beads ( $\times 100$ ).

FIG. 4.—Transverse section of posterior tibial nerve in a case of advanced general paralysis, showing a fairly healthy condition ( $\times 100$ ) in contrast with—

FIG. 5.—Transverse section of posterior tibial nerve from a case of alcoholic insanity, showing marked neuritic change characterised by disappearance of myeline fibres ( $\times 100$ ).

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*The Systematic Estimation of the Leucocytosis in Certain Cases of Insanity: with Special Reference to the Toxæmic Theory.*<sup>(1)</sup> By S. CARLISLE HOWARD, M.D., Assistant Medical Officer, London County Asylum, Horton, Epsom; formerly Assistant Medical Officer, District Asylum, Murthly, Perth.

SURVEYING insanity as a whole, one recognises as a fundamental fact that insane persons belong to a class who start life with a "deficient grade of organisation" of the nervous system called "hereditary predisposition." Some authorities hold that this is the *sine quâ non* of insanity, but such a view, I consider, is not strictly accurate. It is certainly not borne out by statistics. All observers, using even indifferent discrimination, must have noticed cases in which no hereditary factor could be traced, but in which much self-abuse had occurred—either in the form of alcoholic, sexual, and other excesses—or where



syphilis or other powerful toxæmic conditions had been contracted. Such conditions, I argue, may themselves break down the most hardy constitution and leave it a prey to secondary infections or intoxications, which may manifest themselves as insanity. Assuming that the insane, prior to their attack of mental disease, suffer from either some hereditary weakness, or some acquired constitutional degeneration, it is most probable that such defects act a dual part, weakening not only the nervous system, so that it is more susceptible to the actions of toxins and environments, but also weakening the natural defences of the body. The nervous system of these people is thus laid open to more severe and frequent attacks from poisonous substances, whether of bacterial, metabolic, or other sources, than is the nervous system of a more normally organised individual. In support of this statement I would mention that Dr. L. C. Bruce (1) has pointed out that over 60 *per cent.* of maniacal patients were deficient in the normal protective agglutinin to certain strains of *Staphylococcus aureus*. This agglutinin is always present in healthy sera. Further, Dr. C. J. Shaw (2) has ably demonstrated that the reason tubercular diseases account for so large a proportion of the deaths in asylums lies, not in any faulty hygienic precautions, but in the fact that the resistive power of the insane to tubercular infection is below par. Assuming that this hypothesis is true, we can more readily understand why the various insanities so frequently resist our efforts to cure them.

Besides this hereditary or acquired weakness of the nervous system and general defences, some secondary or combination of secondary influences is usually necessary to tilt the mental balance of these people towards insanity.

These secondary influences have been very broadly divided by Dr. L. C. Bruce (3) into two main divisions, namely, the "toxic" and "non-toxic" causes of insanity. It is with the toxic division—or, more strictly speaking, with that subdivision which Dr. Bruce has called "the toxins of bacterial origin"—that I shall deal. Reviewing the toxæmic theory of insanity, one finds that Macpherson (4 and 5), more than ten years ago, compared the pathology of the histological changes occurring in puerperal and certain of the confusional insanities. He believed that puerperal insanity was frequently of toxic origin, and, reasoning by analogy, he classified confusional

insanities as also toxic. It is now universally admitted that the majority of puerperal cases are of undoubted bacterial origin. Further, he states, "the basis of all forms of insanity is a presumption for which there is a fairly good foundation, but no direct proof. . . . There is, however, every reason to believe that the field of toxic nerve-disease is one of the most extensive in morbid psychology, and that it is because we are still on the threshold of inquiry that its recognition is not more general."

Following closely in the path suggested by Macpherson, we have Dr. Ford Robertson (6), who, with microscope and highly trained histological technique, corroborates and augments Macpherson's observations. Later, we find Dr. Thomas Claye Shaw (7) saying, "It would indeed have been strange if the advent of bacteriology, and the study of toxins and vaccines, had not influenced our opinions and treatment of mental disease. There has indeed been a revolution in our estimation of causes and pathological processes since the study of micro-organisms was seriously undertaken, and it is clear now that many of our old postulates will have to be re-written."

Further, we have on the Continent Bianchi and Piccinino (8) examining the blood and meninges of the insane bacteriologically, and discovering, in certain delirious cases, a bacillus, for which reason they have termed the condition "acute bacillary delirium." A little later we find D'Abundo and Agostini (9) formulating hypotheses as to the part taken by intoxications and infections in the causations of nervous and mental diseases. They regard these agents as the most frequent, conspicuous, and active elements in the pathogenesis of nervous diseases in general. They further consider that infective toxic agents can manifest their action in any part of the nervous system "leading to peripheral or central, systemic or disseminate localisation, and resulting in acute or chronic neuropsychosis." At the present day Dr. L. C. Bruce is prominent and active among the pioneers of the toxic theory. He champions this theory with much vigour from a general and exhaustive clinical point of view, paying particular attention to hæmatological and bacteriological observations. Armed with a thorough appreciation of the advances made in general medicine by the improved methods in clinical technique, he has gleaned much of that positive knowledge the absence of which Macpherson so much deplored.

A *résumé* of Dr. Bruce's findings and methods of investigation will not be out of place here. His field of research lay in three principal divisions, *viz.* :

- (1) The estimation of the leucocytosis.
- (2) The bacteriology of the urine, fæces, and blood.
- (3) The estimation of the excretion of urea and chlorides.

I shall review the first two divisions, and omit the last one as it does not come within the scope of this article.

Dr. Bruce's leucocyte count consisted of an estimation of the total leucocytosis by means of the Thoma-Zeiss apparatus and a differential count from blood-films stained with Jenner's eosin methylene blue. In this way Dr. Bruce examined a large number of cases of confusional mania, *folie circulaire*, katatonia, hebephrenia, and excited melancholia, in all of which he found a fluctuating hyper-leucocytosis which bore a definite relationship to the course of the disease. Such observations include thirty-six cases of mania of the *folie circulaire* type, and thirty-one cases of the confusional type—in every case a varying degree of hyper-leucocytosis was observed.

Bacteriologically, Dr. Bruce's initial case was one of mania with confusion in the typhoid state. From the blood of this case he isolated a short streptococcus. The serum of the patient agglutinated this coccus in a dilution of 1 in 30 within half an hour. Two control sera failed to give a reaction after twelve hours. After this case Dr. Bruce and his assistants made numerous bacteriological examinations of the insane, not only of the blood but also of the urine and fæces. The last source ultimately proved the most fruitful. The agglutination was the test by which the invading organism was identified. Briefly, if an organism isolated from any of the above mentioned sources was agglutinated by the serum of the patient, and not by the serum of the controls, that organism was considered as a causal toxic agent.

I have followed on the lines indicated by Dr. Bruce, and I hope to demonstrate the high importance of systematic blood examination.

- (1) As a possible means of diagnosis.
- (2) As an indication to treatment.
- (3) As an aid to the forming of a prognosis.

In the first instance I intend to review briefly the condition

of the leucocytosis in well known and well understood infective and infectious cases. By so doing the strong light of analogy will assist us in reading a possible solution where certain links in the chain of positive information are at present wanting. In certain well-recognised infective conditions such as appendicular abscess, furuncle, carbuncle, empyema, superficial abscess, etc., the symptom of hyper-leucocytosis is practically never absent, and may rise higher than 20,000 per c.mm. (10) of blood. In the same way, in general infections such as diphtheria, pneumonia, rheumatic fever, etc., a more or less decided leucocytosis is regularly seen. This rise of the leucocytes in strength of numbers is regarded as an effort of the human organism to rid itself of the inimical and irritating invading factor. In short, it is a protective reaction, a mobilising of the body's first line of defence for its self-preservation.

The knowledge of this functional characteristic or defensive action of the leucocytes is rapidly becoming universally disseminated, and in consequence we hear more and more frequently of the artificial stimulation of a leucocytosis for prophylactic purposes, particularly before surgical operations. It is also often used in the initial stages of various diseases.

From this short survey it will be observed that in a large number of diseases, admittedly of a bacterial origin, a hyper-leucocytosis is a common and regular feature. Further, it should be noted that this leucocytosis is regarded as Nature's method of removing, or attempting to remove, the causal disease from the body. From this I think I may with good reason argue conversely that where there is a hyper-leucocytosis one may expect to disclose some focus of irritation, most probably of a bacterial nature. Unfortunately, such foci are often obscurely placed, and only discovered after very careful search, and frequently escape one even in spite of every effort to locate them.

Again, if such a hyper-leucocytosis occurs, as a common feature, in a series of cases all presenting the same train of symptoms, and therefore deserving to be classed under a common diagnostic term, such as cases of confusional mania, it may be reasonably deduced that such a hyper-leucocytosis very strongly suggests that that class of disease is of bacterial origin, or that a bacterial invasion is intimately connected with it.



There are considerable differences of opinion as to the exact meaning to be read from leucocytic reactions. Ehrlich, Cabot, and other authorities on the subject, hold that in conditions of an inflammatory nature the number of leucocytes per c.mm. of blood varies directly with the intensity and extent of the infection. Dr. McCuen Smith, of Philadelphia, at the meeting of the British Medical Association at Toronto in 1906, stated that the number of leucocytes per c.mm. of blood is an indication of the amount of the body resistance, while the percentage number of polymorphonuclear leucocytes indicates the intensity and extent of the infection. Still another method of interpreting the leucocytosis is to estimate the polymorphonuclear leucocytosis per c.mm. This is done as follows :

$$\begin{array}{l} \text{Total number of leucocytes} \quad \times \quad \text{Percentage of polymorphs to} \\ \text{per c.mm.} \quad \quad \quad \text{other forms of leucocytes} \\ = \text{Total number of polymorphs per c.mm.} \end{array}$$

For example, in a given case we may have a leucocytosis of 15,000 per c.mm., and a polymorphonuclear count of 70 *per cent.*, the actual number of polymorphs per c.mm. is therefore 10,500. By this means we know how many of the fighting variety of leucocytes are in each c.mm. This is the method I have adopted. The accompanying charts indicate the polymorphonuclear leucocytosis per c.mm. of blood.

In making these systematic observations of the changes occurring in the relative and absolute number of the white blood-corpuscles, I estimated the leucocytosis by means of the Thoma-Zeiss apparatus, after the method advocated by Coles (11). In the differential count the film was stained by Jenner's eosin methylene blue, and an oil-immersion lens was used. I never counted less than 200 cells, and in doubtful cases I counted 400. Moreover, care was taken to obtain the blood at a regular hour on each occasion. The hour selected was just before the mid-day meal ; by this precaution the error of the presence of a lymphocytosis excited by food was avoided.

These observations include cases of mania and melancholia of the *folie circulaire* type, *i.e.*, the manic-depressive variety of Kraepelin, mania with confusion, and so-called alcoholic insanity. The observations were made either every day or every second day, and were continued for at least one month, and, in some cases, for as long as from three to six months. It will be



noticed that the leucocyte reactions stand in bold relation to the remissions of such conditions, and in certain cases to their subsequent relapse.

*Case of D. McA.*—Male, æt. 21, admitted September, 1906, suffering from excitement without confusion of fourteen days' duration.

*History.*—His uncle on his mother's side had suffered from insanity. The patient was a youth of steady habits, he was a total abstainer, and smoked in moderation. He had been losing weight for some two months previous to admission. Otherwise he had always been healthy.

*Physical condition.*—He was tall and well developed, but anæmic, ill-nourished, and run down. His tongue was coated, his breath was foul, and his bowels constipated. He had very little desire for food. Previous to admission he had slept badly and dreamt a great deal. His temperature was 99° F., pulse 72–84, and leucocytosis 6000 per c.mm.

*Nervous system.*—He had no tremors, either of hands, tongue, or facial muscles. His pupils acted equally to light and accommodation. His superficial reflexes were exaggerated, his deep reflexes were nearly absent. No ankle clonus was present. Mentally, though restraining himself with an effort, he was facetious and childish in his behaviour. His special senses were hyperacute, and in consequence his attention was unsteady. Any little sound or movement in the wards immediately attracted him. He was not confused, and had neither hallucinations nor delusions. During the first fortnight of his stay in the hospital he restrained himself fairly well. Occasionally he became restless and impulsive, and in explanation of such conduct he said, "I could not help it; I just lost control of myself." At first he slept very badly, and later he became restless, excited, talkative, and at times maniacal. During the more acute period his face was flushed, his tongue and lips were dry and covered with sordes, and his breath was foul. His leucocytosis was very irregular, but had never risen above 18,000 per c.mm. At this period I injected him in the flank with 1 c.c. of terebine; three days later his polymorphonuclear leucocytosis rose to 21,000, his temperature to 100° F., and his pulse-rate to 100 per minute. Mentally he became much quieter and more obedient. Ten days later he had another attack, when his leucocytosis fell to 5,000 per c.mm. At the

end of the twelfth day, however, they rose again to 22,000 and he again became quieter. This second rise of his leucocytosis I regarded as being due to the irritation to which he had subjected the abscess in his flank during his restless period. A week later he had another slight maniacal attack, during which his leucocytosis rose to 23,000 per c.mm. On this occasion, instead of falling and remaining low for several days, it continued to swing for nearly a month between normal and 13,000

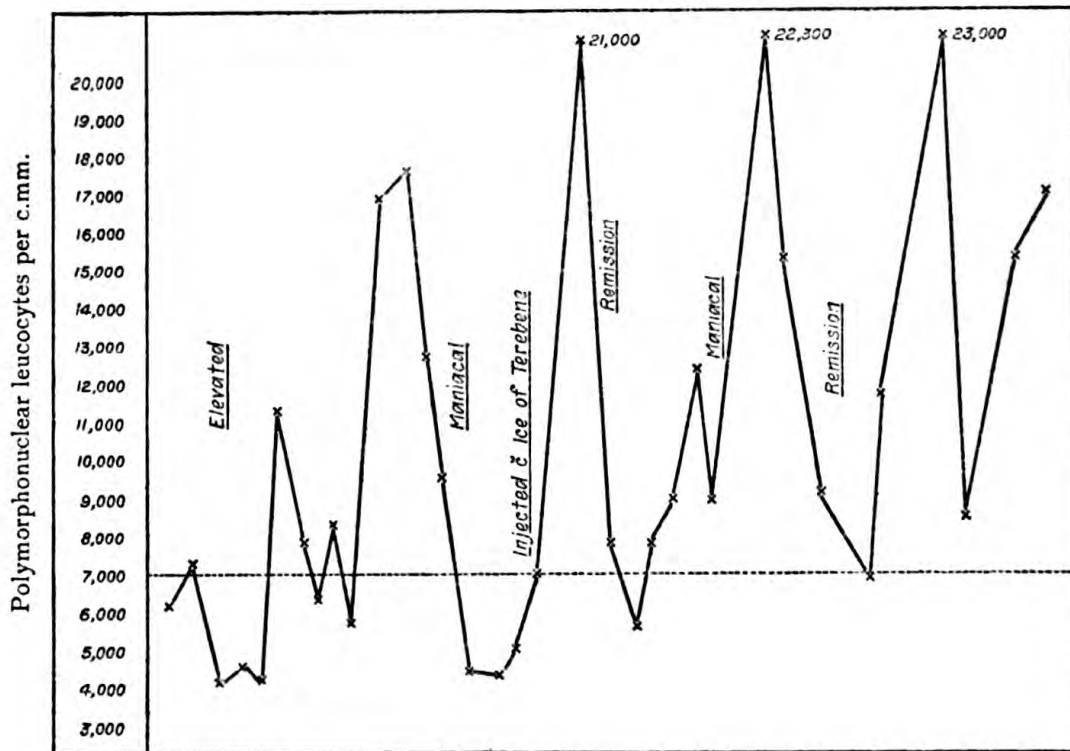


CHART 1.—Case of mania (manic-depressive).

per c.mm. Thereafter it gradually fell to normal. After this last leucocytic rise his mental symptoms improved and he put on weight rapidly; he increased from 9 st. 2 lb. to 10 st. 12 lb. in two and a half months. I isolated from the faeces and urine of this case a short streptococcus, which his serum agglutinated in a dilution of 1-40 in twenty minutes. Control sera did not affect it in twenty-four hours.

For the leucocytosis of this case see Chart 1.

He was discharged recovered in June, 1907, and has continued well ever since.

*Case of W. B.*—Male, æt. 16, admitted September, 1907, suffering from acute excitement and impulsiveness of about one week's duration.

*History.*—No hereditary insanity or neurosis could be traced. His father and mother were both dead; I was unable to discover the cause. One month prior to admission he had been incarcerated in the Perth Penitentiary for theft, and had since been somewhat depressed and moody. He neither smoked nor drank and he seemed a very respectable lad.

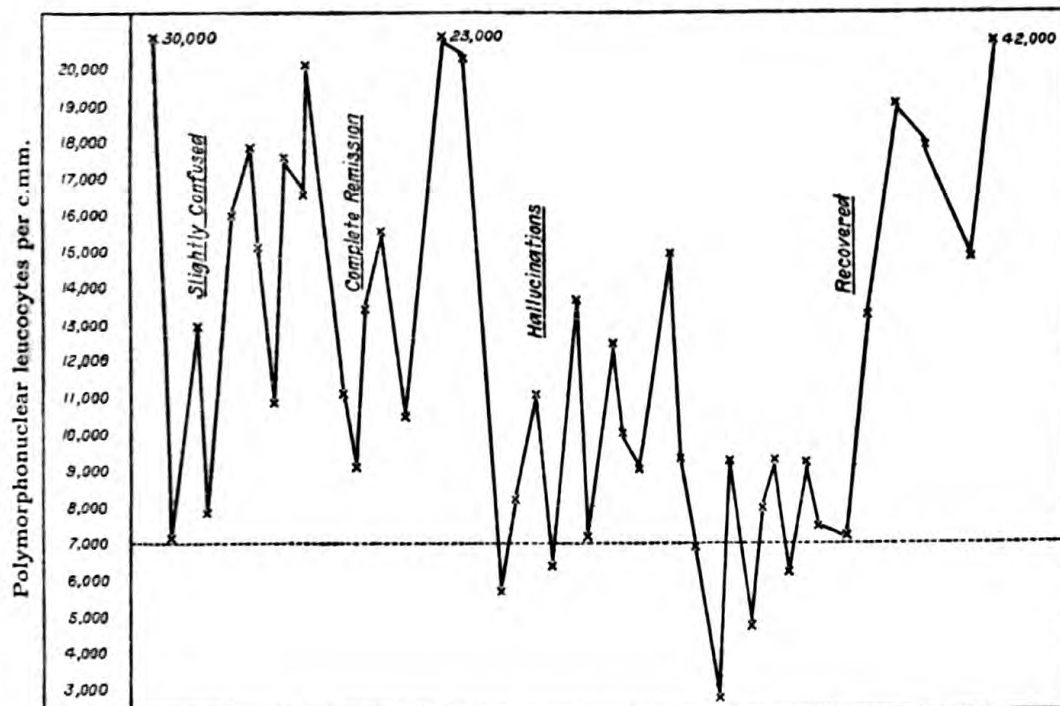


CHART 2.—Case of mania (confusional).

*Physical condition.*—He was fairly well developed, indifferently nourished, and very anæmic. His tongue was coated, his breath was foul, and in spite of large doses of saline aperients and extract of cascara sagrada his bowels had not moved for a week. His temperature was  $97.8^{\circ}$  F., pulse 85–93 per minute, full, regular, and of high tension. His lungs and heart were normal. His leucocytosis was not taken until he had been injected with 1 c.c. of terebine—a week after admission. His leucocytosis then registered 30,000 polymorphonuclear leucocytes per c.mm. of blood (*vide* Chart 2).

*Nervous system.*—His tongue was very tremulous. His

superficial reflexes were exaggerated and his deep reflexes were deficient. There was no ankle clonus. His pupils reacted to light and accommodation.

*Mentally.*—On the day of admission he was very excited, noisy, and somewhat confused. The following day he had hallucinations of hearing, delusions of identity, and was dejected. He thought I was God, and sought forgiveness of his sins. He was constantly moaning or shouting, and refused to take food. He remained more or less in this state for four days, taking very little more than a glass of milk a day, and that only when poured into his mouth. At night he frequently required one to two drachms of paraldehyde before he could sleep. On the fifth day after admission I injected him in the flank with 1 c.c. of terebene. The following day he was mentally much clearer; he sat up, took his food voluntarily, and at night slept eight hours. This improvement synchronised with a high polymorphonuclear leucocytosis of 30,000 per c.mm. He continued well for three weeks and then had a return of his hallucinations. Under the treatment of a large saline enema and a dose of calomel this attack passed off in a couple of days. From that date he progressed steadily, and was discharged recovered two months after admission.

*Case of Mrs. McN.*—Æt. 36, admitted November, 1906.

On admission she was restless, excited, and at times maniacal. She talked incessantly and incoherently, but was not in any way confused.

*History.*—Five years before admission to this asylum she suffered from puerperal mania, for which she was under treatment in one of the Glasgow asylums for about six months. In October, 1905, she became slightly elevated, but was then successfully treated at home.

*Physical condition.*—She was well developed and well nourished, although somewhat anæmic and run down. She had been in bad health for about one month prior to admission. Her stomach was out of order, her bowels were constipated, and she had no desire for food. She had been menstruating irregularly. She had an aortic systolic murmur. Her temperature was 98·6° F., her pulse was 77 per minute, full, of fairly high tension, and somewhat irregular. Occasionally it quickened in the morning to 80 and 86 beats per minute.

*Nervous system.*—She had tremors of hands, tongue, and

facial muscles. Her pupils reacted equally, though sluggishly, to light and accommodation. Both her superficial and deep reflexes were deficient. *Mentally* her special senses were hyperacute, and she remained for about ten weeks in a restless, noisy, and talkative condition. She had no delusions, but she occasionally showed evidence of hallucinations of hearing. At the end of these ten weeks she became quieter and commenced to put on weight. Three weeks later she showed well-marked signs of depression, which lasted for nearly three months,

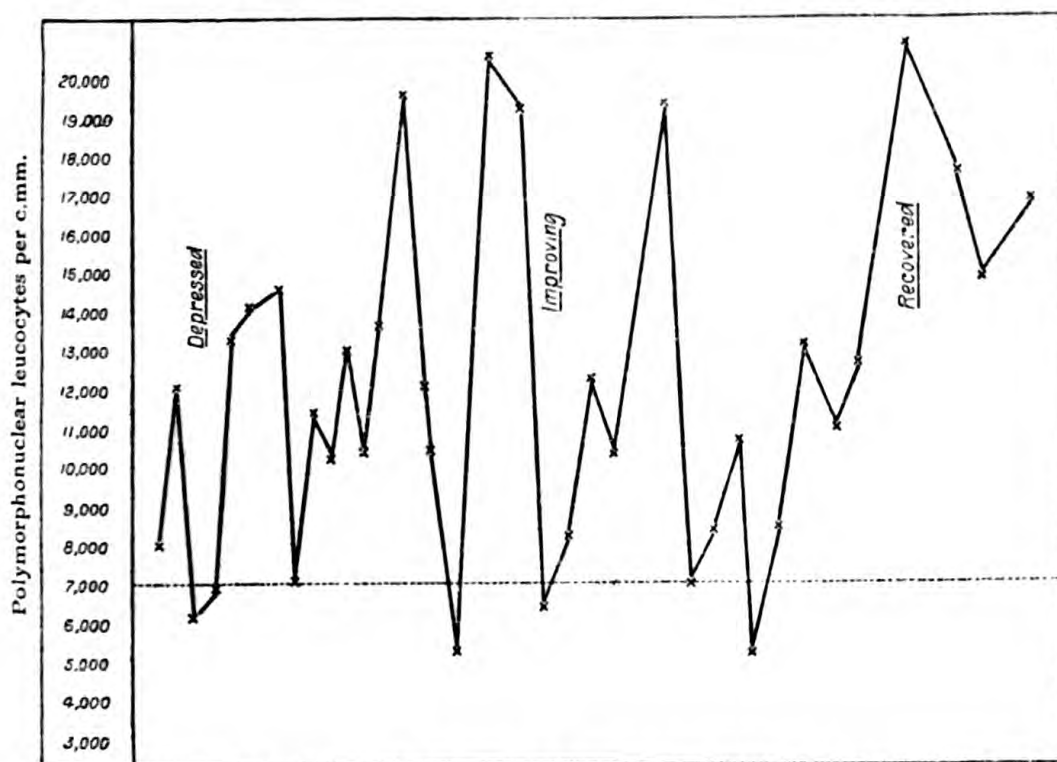


CHART 3.—Case of melancholia (manic-depressive).

during which period I kept a record of her leucocytosis, and her body reaction was fairly good (*vide* Chart 3).

After eight months' treatment she was discharged recovered but she was readmitted about three months later suffering again from melancholia. On this last occasion she remained under treatment for about seven months, and was subsequently discharged recovered.

The following three cases are particularly interesting, throwing as they do a side-light upon the question of alcoholism as a cause of insanity :



*Case of J. Cyn.*—Male, æt. 34, was admitted suffering from maniacal excitement with considerable confusion.

*History.*—He had a long history of excessive alcoholic and nicotine indulgence; he usually smoked from four to six ounces of strong black tobacco per week. He was a "chronic soaker" rather than of the dipsomaniac type. A few weeks prior to admission he had taken rather more alcohol than usual, and, owing to irregular employment, had been under-feeding himself.

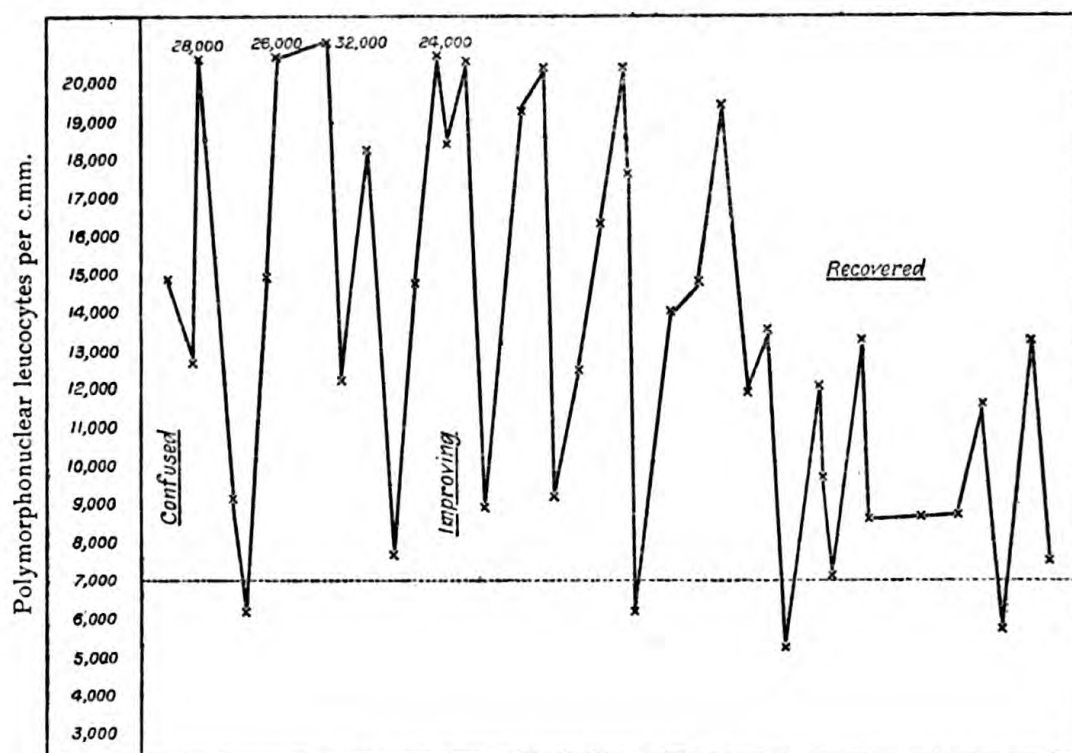
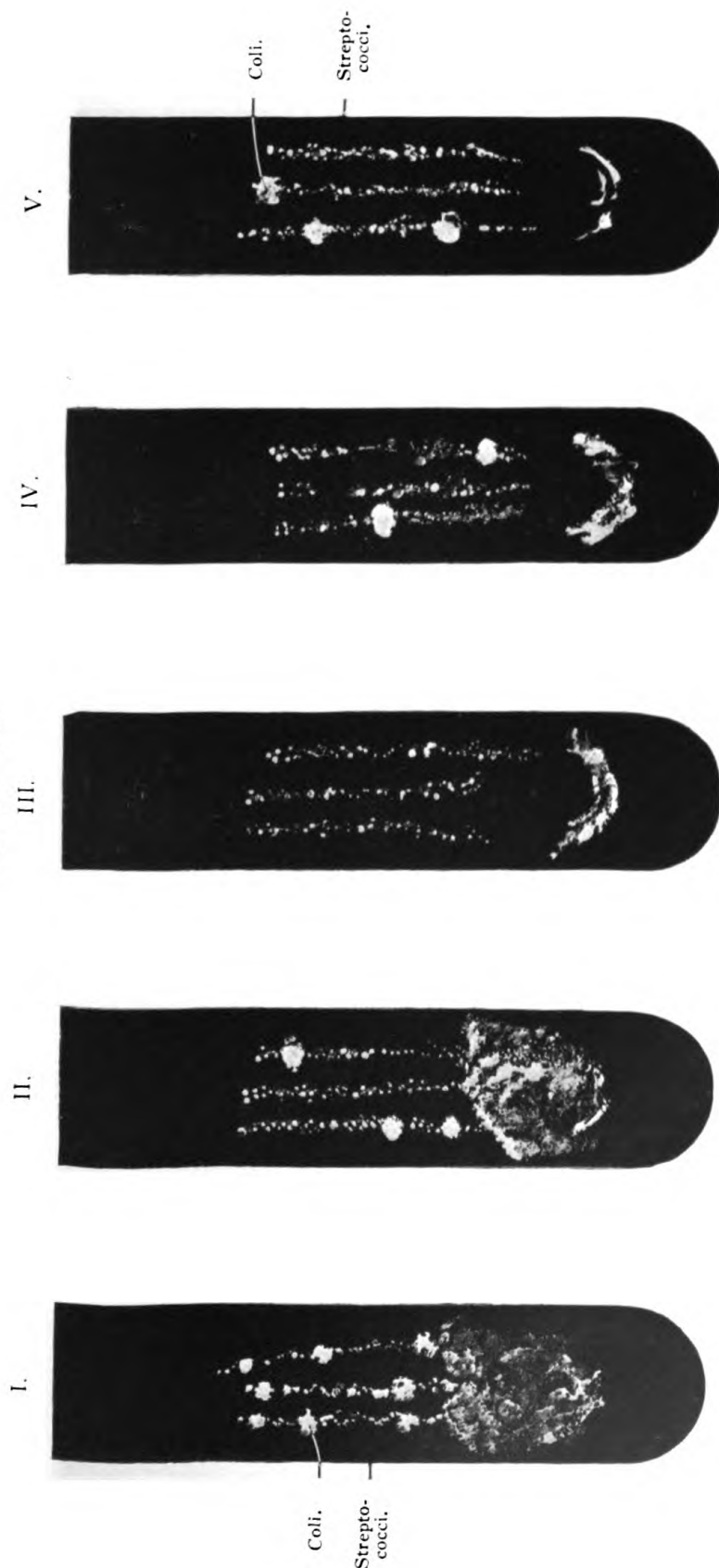


CHART 4.—Case of mania with confusion.

*Physical condition.*—On admission he presented all the symptoms of a chronic toxæmia. He was ill-nourished, ill-developed, and anæmic; his tongue was coated with a thick fur, his breath was very offensive, and his bowels stubbornly constipated. His skin was dry and sallow. His temperature was 98.6° F., with a tendency to be irregularly subnormal; pulse was 98 and feeble.

*Nervous system.*—His reflexes, both superficial and deep, were deficient. It was impossible, owing to his confusion, to

CHART IVa.



Pure cultures of streptococci.

Culture from faeces in a case of mania (confusional).

To illustrate Dr. S. Carlisle Howard's paper.

*Adlard & Son, Impr.*



test his recognition of pain, temperature, or sensation. He had fine tremors of the muscles of the hands and tongue.

Mentally, he was incoherent, restless, and impulsive. He had hallucinations of sight, and delusions that he was going to die "to save the world."

I examined his leucocytosis three days after admission, and found his polymorphonuclear leucocyte count per c.mm. of blood to be 14,946. I observed it regularly every second day from that date until he was discharged recovered four months later. It was found to fluctuate from 5,000 to 32,600, the majority of the counts being well above the normal line (*vide* Chart 4).

Shortly after his admission I isolated from his urine a short streptococcus, which his serum agglutinated in twenty minutes in a dilution of 1 to 40. Two control sera did not affect it in twenty-four hours. A short time later I examined his fæces bacteriologically. The technique employed was as follows: A sample of his fæces was placed in a sterile Petrie's dish, and from it a sterile platinum needle was charged; three strokes were then made on each of seven sloped agar tubes, the same surface of the needle, as near as possible, being used to make each stroke. The tubes were then incubated for forty-eight hours, when cultures were found of almost pure streptococci colonies. There were only six colonies of *Bacillus coli*, the remaining growth being streptococci (*vide* Chart 4A). Testing these cocci to the various sugars, as recommended by Houston, I found that they were the same as those isolated from his urine.

*Case of J. C—d.*—Male, æt. 27, admitted suffering from confusion and excitement.

*History.*—There was again a history of alcoholism and loose living. He had recently been in prison. He was confused, restless, and impulsive. During his confinement in this asylum he made one or two indifferent attempts at suicide. On one occasion he swallowed an open safety-pin, and on another occasion he tied a sheet round his neck. He had neither hallucinations nor delusions, but was a physical and mental degenerate. He presented an irregular polymorphonuclear leucocytosis, varying from 2,000 to 13,400 (*vide* Chart 5).

It is interesting to note that in this case the leucocyte

reaction was very indifferent, and that, although under treatment for nine months, he did not recover. He was discharged to the care of his friends "relieved."

*Case of Alex. C.*—Male, æt. 25, admitted suffering from acute excitement.

*History.*—He was an Army pensioner, and while in the service he lived for several years abroad. During his sojourns he suffered from dysentery, malaria, and finally heart disease, for which he was invalided home. For a few weeks prior to admission he indulged in alcohol to great excess, and in consequence he became delirious and delusional. He was treated at home for a week and then sent to this asylum.

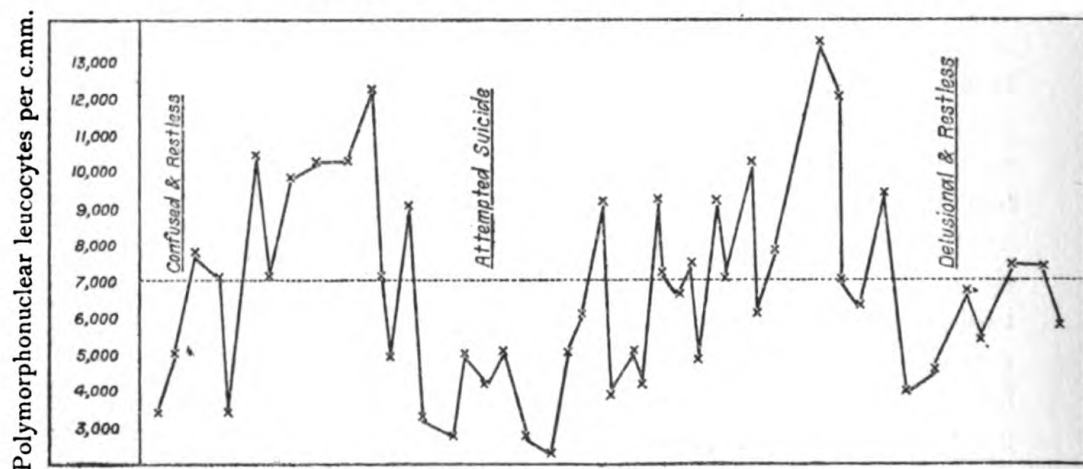


CHART 5.—Case of mania with confusion.

On admission he was sleepless, restless, and disinclined to take food. He had delusions that his stomach had been removed, and that he was to be cut to pieces and thrown into the river Tay. His leucocyte reaction was subnormal, being 3,240 per c.mm., and during the six weeks he was in the asylum it never rose above 8,768 per c.mm. (*vide* Chart 6). Under the treatment of bromides, milk diet, and rest in bed, he made a rapid recovery.

On reviewing these three cases there can be no doubt that the last-mentioned was one of uncomplicated alcoholism. The poison having been withdrawn, and the general system placed in the most favourable circumstances for its rapid restoration to health, the patient naturally made a speedy recovery.

In the first two cases, however, there is an additional condition to contend with as evidenced by the polymorphonuclear



hyperleucocytosis. The nature of the complication, arguing on the lines previously mentioned, I judged to be a bacterial one. This conclusion was later strongly supported by the isolation of a streptococcus from both the urine and feces of the first case, which organism was agglutinated by the patient's serum, and was not in the least affected by the sera of two control cases. It naturally follows that although the alcohol, which may be considered as the "last straw," is withdrawn, yet the body must overcome or suppress the complicating source of toxæmia before recovery can take place. In the first case we saw that recovery took place within four months. In the

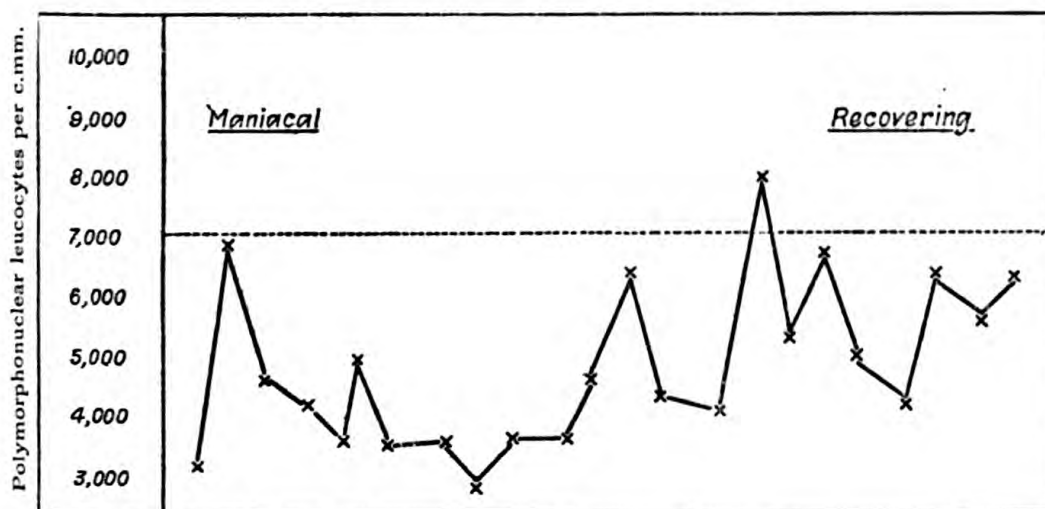


CHART 6.—Case of mania (delirium tremens).

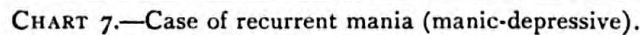
second case the body was incapable of overcoming the toxæmia even within nine months. The possible explanation of this I shall discuss later when drawing a comparison between the acute and chronic cases.

*Case of Mrs. R.*—Æt. 40; admitted January, 1907, suffering from hallucinations of sight and hearing, with acute excitement.

*Physical condition.*—She was very anæmic and ill-nourished. Her tongue was covered with a white fur; her breath was foul and bowels constipated. Her temperature was 98.9° F., pulse 85, full, irregular in rhythm and of high tension. She had little desire for food, and occasionally had to be hand-fed. She slept irregularly, and frequently required paraldehyde.

*Nervous system.*—Her pupils reacted equally to light and

*Mentally*, she was elevated, noisy, and restless. Her special senses were hyperacute. She was constantly chattering incoherently, but she always remained conscious of her surroundings. She had vivid hallucinations of sight and hearing. Occasionally she barricaded her bed with pillows, bed-clothes, or anything movable she could get hold of, in order "to keep away evil spirits." Her attention was readily attracted, but she



The initial attack of mania for which she was admitted into this asylum lasted for five months. Since that time she has had recurrent attacks, each one lasting about fourteen days, and I was thus enabled to obtain records of her leucocytic reactions which corresponded with the alternating phases of her mental condition (*vide* Chart 7).

*History.*—Up to about three months prior to admission she was healthy and active. She then began to grow thin, look pale, and lose interest in her work. She had severe headaches during the day, and at night she suffered from insomnia.

*Physical condition.*—She was anæmic and ill-nourished. Her complexion was sallow and unhealthy; her skin was greasy. Her tongue was coated with a white fur, breath was foul, and she was very constipated. Her pulse-beat was from 82 to 94 per minute, hard and incompressible; temperature normal. She had reduplication of the second sound, heard at the apex and the aortic area. She had varicose veins of the legs.

*Nervous system.*—Her pupils reacted equally but sluggishly to light and accommodation. Her hearing was very good. Her motor functions were deficient and senile. Her plantar reflex was delayed and abnormal; there was slight dorsiflexion, with considerable abduction of the foot. Her knee reflexes

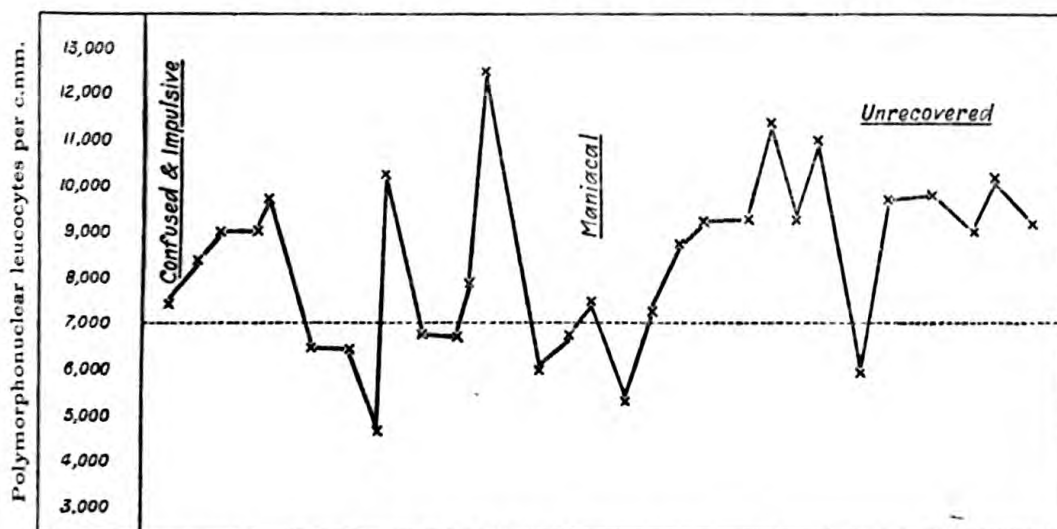


CHART 8.—Case of mania (confusional).

were practically absent. She had fine tremors of the muscles of the hands and tongue. Her organic reflexes were under control, although during severe attacks of confusion with torpor she passed her motions in bed.

*Mentally* she was confused, restless, noisy, and at times impulsive and dangerous. She had the delusion that she was blind and said she was haunted by dreams.

The leucocytosis shows that the power of her body to react to the toxæmia is very poor and unsatisfactory. She has now been under treatment in this asylum for about a year, and she shows no tendency towards mental improvement (*vide* Chart 8).

In considering the foregoing charts and cases, a most striking difference will be noticed between those which recover and

those which do not. In the curable cases the body reaction, as registered by the polymorphonuclear leucocytosis, is high and powerful. Such cases usually run a fairly definite and favourable course. In the unrecovered cases, judging by the leucocytosis, the course and the relapsing character of the case, the body is apparently incapable of reacting to the bacterial invasion. In consequence the toxæmia continues to assert its destructive action, and attack follows attack in quick succession till, finally, organic brain changes occur, and with them come fixed delusions and dementia.

The reason why one person is capable of reacting to and of resisting such a bacterial invasion while another person is incapable of offering anything but a weak resistance (and, in consequence, mentally and intellectually succumbs) is probably but part of the, at present, impenetrable mystery of hereditary predisposition. This theory is supported by the observations of Drs. Bruce and Shaw. The former discovered in the insane as a class an absence of normal agglutinins to certain strains of *Staphylococcus aureus*, while the latter observed a deficiency in the resistive power of the insane to the tubercle bacillus. This deficiency, he holds, accounts for the high mortality among that section of the community from tubercular diseases.

From such a comparison of the curable and incurable cases it will be seen that an estimation of the polymorphonuclear leucocytosis may be a valuable means of forming a prognosis. This is particularly so in cases of mania, which class of disease forms at least 50 *per cent.* of the admissions into most asylums.

In those cases in which the leucocytosis fails to react in anything but a small degree, and in which the mental symptoms are prolonged over many months—as exemplified in Charts 5, 7, and 8—a bad prognosis may with confidence be given. Such leucocyte reactions can but mean one of two things; either a very severe toxæmia, causing a leucopænia, or a deficiency in the activity of the leucocyte-producing tissues. In either case the ultimate result will be the same. Since the body is not in a condition to offer satisfactory resistance to the causal toxic agent, the nervous system will continue to be poisoned till its higher centres are eventually destroyed by the ever-present toxin.

Again, if the leucocyte reaction is such as is demonstrated



in Charts 1, 2, 3 and 4, and the patient's environment and age are favourable, a good prognosis may be readily given. In such cases the leucocytosis would register the resistance offered by the body, and by a judicious stimulation, either by a terebine abscess or otherwise, the body may be made to react more powerfully and over a longer period than it would do were the disease merely allowed to run its course. In the wise and special use of such means there is an encouraging possibility of suppressing and even eradicating the seat of infection before permanent brain damage has occurred.

In the three so-called alcoholic cases previously discussed, I stated on the evidence of a polymorphonuclear leucocytosis that I considered two of these cases to be suffering from a toxæmia (of a streptococcal character) complicated with alcoholism. The third case I considered was one of uncomplicated alcoholism. The course and termination of these cases justified and corroborated the diagnosis made. In the uncomplicated case, once the patient was placed in a more healthy environment, his supply of alcohol stopped, and his daily habits regulated, the recovery was rapid. In the other two cases, however, this treatment was not sufficient to obtain a quick return of the mental balance. The cause of this retardation was without doubt the action of that more subtle toxæmia, the presence of which was indicated by the hyperleucocytosis and bacterial agglutinins in the blood. From these observations it will be apparent that the systematic estimation of the leucocytosis may be of much diagnostic value. By its means a case of simple alcoholism may be readily differentiated from more serious conditions. It is stated by Cabot that alcoholism is occasionally associated with a hyperleucocytosis. The fact that a hyperleucocytosis is only sometimes found would seem to indicate that some complicating source of toxæmia is occasionally associated with this condition. This can be readily understood when the state of the alimentary canal is kept in mind.

These observations are the result of repeated and continuous estimation of the leucocytosis. An examination of the accompanying charts very clearly shows that a single estimation, or even half-a-dozen counts, may coincide with a temporary leucopænia, and the result of such observations would be entirely misleading and deceptive.

LVI.

6



In regard to treatment, I mentioned that, in the cases of McA— and Wm. B—, terebene abscesses were made in the flank, and that in consequence the polymorphonuclear leucocytosis rose as high as 21,000 per c.mm. of blood in the former case, and 30,000 per c.mm. in the latter. As a result—or at least synchronously with this rise in the polymorphs—there was an abatement of the acute symptoms and a rapid improvement in the general tone and character of the physical condition. The question arises—were these changes in the patient's condition and demeanour a mere coincidence, or were they vitally connected with the leucocytosis which had been artificially induced by the injection of terebine? The literature of psychiatry contains many instances in which, after an intercurrent attack of one of the exanthemata, of carbuncles, erysipelas, or some other severe inflammatory state, unexpected recoveries have been recorded. Unfortunately such intercurrent conditions which are followed by a favourable turn in the mental symptoms are of exceptional rather than common occurrence. A striking example came under my notice about twelve months ago. A female patient was admitted into this asylum suffering from melancholia of the manic-depressive type. She had previously been under treatment here. Two days prior to admission she set fire to her nightdress, sustaining a severe and extensive burn over the left thigh and lower part of the abdomen; she also received a number of smaller burns on the fingers of both hands and upon the right thigh. I only estimated her leucocytosis on two occasions, when it registered 31,040 polymorphonuclear leucocytes per c.mm. on the first day, and 30,600 per c.mm. on the second day. She remained under treatment in the asylum for about three months, and during that time she showed no mental symptoms beyond slight irritability and a tendency to be emotional, yet she had been depressed for five weeks prior to admission, and her previous attack treated in this asylum lasted for six months. Dr. Clouston, in his *Clinical Lectures on Mental Diseases*, says, "I think we shall some day be able to inoculate a septic poison and get a manageable counter-irritant and fever, and so get the alterative effect of such things, and the reaction and stimulus to nutrition that follows febrile attacks."

The "alterative" effect referred to by Dr. Clouston is what we need to study with the greatest care in order that we

may understand what produces the effect and the manner in which it obtains its result.

In examining the leucocytosis of the intercurrent diseases which are reported in literature as being followed by a remission of the mental symptoms, it will be found that they are diseases which are very frequently associated with the phenomenon of hyperleucocytosis. I have already mentioned that this increase in the number of the leucocytes is Nature's method of repelling, or attempting to repel, the invading and irritating factors productive of the disease. This rise of the leucocytosis in these secondary conditions is, I consider, the cause of the "alterative" effect commented upon by Dr. Clouston. If in a condition such as mania, which is accompanied by a hyperleucocytosis, an intercurrent disease of an inflammatory nature occurs, *e.g.*, erysipelas, the leucocytosis, providing the leucocyte-producing powers of the individual are fairly normal, will, owing to the extra stimulus, be greatly increased. This addition to the defensive forces is obviously bound to have a very definite action upon the course of the primary disease, *i.e.*, the mania, as well as upon the intercurrent condition. By a study of such accidental cures we see dimly into Nature's methods and get a hint of a means we might profitably adopt. To test the efficacy of this method it remains but to imitate Nature. This I have done by injecting 1 c.c. of terebene in two of the cases here quoted, and in doing so I have been able to corroborate similar results obtained by Dr. Bruce. In some of Dr. Bruce's cases the best results followed upon the accidental contamination of the abscess cavity by *Staphylococcus aureus* and other organisms. Such a contamination led to a well-sustained leucocytosis, and none of the patients presented disagreeable physical symptoms. In fact they steadily gained weight and made excellent recoveries.

In all the foregoing cases it will have been noticed that the general physical symptoms were very much alike. I will now review these symptoms and also supplement them from other cases which have come under my observation.

In such toxic cases the patient is usually anæmic and ill-nourished. These symptoms almost invariably come on a month or two before any mental symptoms are noticed. The temperature is irregular and usually subnormal. It frequently rises a point or two above normal at the beginning or during

an acute attack. The pulse is irregular in rhythm and tension, and it increases in both characters at the beginning and during an acute attack. This observation is valuable in the case of impulsive patients. It is usually the first sign noticeable, and when present is distinctly indicative of an impending attack. The tongue is frequently covered with a dirty white fur, the breath is foul, and bowels severely constipated. In the course of an acute attack of mania the teeth and tongue may be covered with sordes. The appetite is usually poor and variable, the desire for food is often absent or perverted. The skin may be dry, or unnaturally moist and greasy. Under these latter conditions the odour is always offensive, and, in spite of frequent bathing, usually remains so until convalescence. Headaches and neuralgic pains are frequently present, and in women menstruation is often suppressed. The reflexes, both superficial and deep, are irregularly abnormal.

Such symptoms occur very frequently in the initial stages of various conditions of disease, and are to be met with in every-day practice. In them there is nothing very striking. They are the signs of malaise which may precede many acute conditions or accompany many chronic ones. In states of insanity, however, they are alike interesting and suggestive, especially when observed with a hyperleucocytosis and the presence of specific agglutinins in the blood. Symptoms such as these suggest that insanity is not merely a mental aberration, arising *de novo* in some part of the central nervous system, but also a very serious disturbance of the normal physiological balance. Some authorities hold that such an upsetting of the physical health is entirely secondary to the mental disease. Such a statement is incompatible with the mental improvement which accompanies the return to physical health in those cases which recover. Further, it cannot be said that the physical improvement is due to the mental regeneration, for we very frequently find patients who grow stronger and healthier in body while not in mind ; in fact the prognosis in such cases is usually very bad. Again, the condition of the intestinal flora of these forms of insanity is considerably changed. Normally, in agar stroke cultures of the fæces of the human subject, the growth of the *Bacillus coli communis* is so abundant that all other organisms are obliterated. In the insane the growth is stunted and abnormal, and colonies

of cocci are frequently seen between the colonies of *coli*. In some cases the *coli* are very scanty and occasionally almost absent. A sketch of the growth taken from the fæces of a case of alcoholic mania is given opposite page 74. In it the *Bacillus coli* is almost absent and colonies of cocci are very numerous.

*Resumé.*

The points deserving notice are :

(1) That the insane as a class possess an inferior grade of organisation of the nervous system, which may be due to hereditary factors or may be the result of devitalisation by toxins—such as accompany syphilis, influenza, and other allied diseases.

(2) That the balance of this inferiorly organised system may be readily overthrown by numerous secondary conditions, one set of which is broadly termed a “toxæmia.”

(3) That in this country and abroad toxins of some description or other, whether of intra- or extra-corporeal origin, are widely credited as the active cause of the majority of psychopathic conditions.

(4) That that class of the insane falling under the category of mania presents a very definite and persistent clinical picture, a most noteworthy and important feature of which is the hyperleucocytosis. Moreover, that the general physical symptoms are similar to those found in the more common toxic conditions. This fact, taken in conjunction with the hyperleucocytosis, the abnormal condition of the bacterial flora of the intestine, and the presence of specific agglutinins in the blood-serum, strongly support the theory of the toxic origin of these conditions of insanity.

(5) That maniacal patients as a class form at least 50 *per cent.* of the admissions in most asylums, and that therefore anything which aids in their diagnosis, prognosis, or treatment is a step of great value.

(6) That for purposes of diagnosis the estimation of the polymorphonuclear leucocytosis may be of use to differentiate simple alcoholism from more serious conditions in which alcoholic excess has merely precipitated an attack although it receives the credit of being the exciting cause.

(7) That the systematic observation of the leucocytosis is of



value in prognosis. It has been shown that in those cases in which the leucocytic reaction is not marked there is a strong tendency to chronicity, terminating in fixed delusions and dementia; and conversely, that those in whom the leucocyte reaction is high most frequently recover.

(8) That with regard to treatment by the artificial stimulation of the leucocytosis, the mental illness is often considerably shortened, and that an impending attack may be aborted.

## REFERENCES.

- (1) L. C. Bruce.—“Symptoms and Ætiology of Mania,” *Edin. Med. Journ.*, February, 1908, p. 119.
- (2) C. J. Shaw.—“Opsonic Index to Various Organisms,” *Journ. Ment. Sci.*, January, 1908.
- (3) L. C. Bruce.—*Studies in Clinical Psychiatry*, 1906.
- (4) J. Macpherson.—*Mental Affections*, 1899, pp. 52, 53.
- (5) J. Macpherson.—“Mania and Melancholia,” *Journ. Ment. Sci.*, 1891, p. 212.
- (6) Ford Robertson.—*Pathology of Mental Diseases*, 1900.
- (7) T. Claye Shaw.—“Introductory Address to the Section of Psychological Medicine,” *Brit. Med. Journ.*, September 28th, 1907.
- (8) Bianchi and Piccinino.—*Vide* Ford Robertson, *loc. cit.*, p. 240.
- (9) D'Abundo and Agostini.—*Ibid.*, p. 341.
- (10) Da Costa.—*Clinical Hæmatology*, 1906.
- (11) Alf. C. Coles.—*Diseases of the Blood*, 1908.

(<sup>1</sup>) The essay for which was awarded the bronze medal of the Medico-Psychological Association, 1908.

*The Histological Evidence that Toxins reach the Spinal Cord via the Spinal Roots; with Special Reference to Plasma-Cells.* By DAVID ORR, M.D., and R. G. ROWS, M.D.

IN May, 1907, we published the results of our first series of experiments dealing with the question of toxic absorption along the lymphatic paths of nerves and the effects upon the spinal cord, medulla, and pons.

The experiment consisted in placing a celloidin capsule containing a broth culture of an organism underneath the sciatic nerve or under the skin of the cheek of rabbits and dogs, and we held from the microscopical examination of the



tissues that toxins travelled upwards in the perineural sheath. On reaching the cord they induce degeneration of the myelin, commencing at the point where the fibres lose their neurilemma sheath and become incorporated in the central nervous system.

We have continued our investigations into the above question, and naturally many side-issues have arisen, but what has engaged our attention most has been the observation of the histological changes in the nerve between the toxic focus and the spinal cord. We thought that, once the histological reaction had been observed and its character noted, our original thesis would rest on the more secure basis of confirmatory evidence, and so we would be free to enlarge the scope of our investigations.

Our experimental work is by no means complete. There are several points which require careful control, and so we can only show one part of the investigation on hand. Our method is precisely the same as formerly, with this exception, that in this section of our experiments we endeavour to obtain a toxic effect of a subacute or chronic nature. In this demonstration, then, we hope to show the histological evidence for believing that the toxins gain the perineural lymphatic system, spread between the fasciculi of the nerve along the septa, and into the nerve-bundles to some extent, and, it will be seen, pass upwards over the spinal root ganglia to reach the cord by both anterior and posterior nerve-roots. The toxins while travelling towards the cord affect the non-nervous elements, especially the vessels, to a much greater degree than the fibres of the nerve or the cells of the root ganglia; and the reaction is of an irritative or subacute nature. The changes in the perineurium are most intense at the site of the capsule. One important fact to be noted is the early reaction around the capillaries and the veins, a fact which seems to point to these structures being the channel by which the lymph makes its way back into the general circulation rather than to any selective action on the part of the toxin.

The capsule with the inflammatory reaction around it was cut in transverse section. The organisms inside stained well. Outside, in the immediate neighbourhood of the capsule, there were some small groups of organisms. The exudate surrounding the capsule was composed of three layers: (1) a layer of degenerated polymorphonuclear leucocytes, and cells

with a large nucleus and a considerable quantity of protoplasm which stained imperfectly and showed marked regressive changes; (2) a fibrous layer in whose meshes were many fairly well stained round mononucleated cells; (3) a layer composed of mononucleated cells and typical plasma-cells.

On examining the nerve the most striking feature was the large collection of plasma-cells lying in the meshes of the perineural sheath. Many of these lay loose in the spaces, but they were for the most part collected in groups round the veins, which were dilated, and infiltrated their adventitial wall.

In the sciatic nerve, root ganglia and spinal roots, there were proliferative changes in the smallest vessels, the earliest of which consisted in the presence of small round cells in the adventitial sheath. The more advanced irritative phenomena consisted in the development of a periarteritis bearing a striking resemblance to that found in a chronic encephalitis such as is seen in general paralysis of the insane. At this stage the proliferation in the adventitial sheath is composed of adventitial cells, some mononucleated cells, and typical plasma-cells. Many of the finest capillaries show only plasma-cell formation in the adventitial sheath.

In the posterior root ganglion the nerve-cells showed a mild degree of degenerative change, but the capsular cells around each nerve-cell were greatly increased in number, and in many instances had invaded the nervous elements. Plasma-cells in large numbers were still met with in the lymph-spaces of the sheath of the ganglion, and at the proximal pole of the latter there was often a large collection of typical plasma-cells situated in the interval between the anterior and posterior spinal roots.

In the anterior and posterior spinal roots the reaction around the small vessels was, as indicated above, very marked, and plasma-cell formation was a prominent feature. Some veins in this situation showed at times large collections of small round cells in the adventitial lymph-spaces. Occasionally one observed small circumscribed areas in which the myelin was atrophied, leaving the axis-cylinder bare. In the space so formed there were, not infrequently, typical reticulate cells, the "Gitterzellen" of Nissl. Finally, it is worthy of note that no proliferation or cell grouping has been seen around the arterioles.

In the histological changes which we have shown you one

has no difficulty in recognising the results of irritation, and owing to the nature of the experiment and the distribution of the lesions the reaction cannot be otherwise than due to lymphogenous toxicity. The lesions must map out the course of the toxic lymph, and therefore pathology teaches us, in this instance, the path of lymph-flow in nerves.

But we are inclined to go one step further, and apply our results to the pathology of general paralysis of the insane, in which the irritative vascular phenomena and those of the supporting tissues of the brain are a constant, marked, and progressive feature. Just as in this series of experiments, so in general paralysis of the insane the adventitial lymph-space infiltration, composed of proliferated adventitial cells and plasma-cells, is one of the most striking histological findings. Clinical and pathological investigations point clearly to the fact that general paralysis of the insane is a toxi-infective encephalitis of a subacute or chronic nature, and the changes found are not comparable to those seen in blood infection or intoxication. We suggest, therefore, that whatever may be the exciting agent in the causation of this disease, its primary and even its later effects are exerted *via* the lymph-channels connected with those of the central nervous system, and that absorption of toxins along nerves is worthy of attention.

*Ependymal Alterations in General Paralysis.* By  
HARVEY BAIRD, M.D.Edin., Senior Assistant Medical  
Officer, Cardiff City Mental Hospital.

A GRANULAR condition of the ventricular ependyma, especially that of the fourth ventricle, has long been recognised as one of the most important of the *post-mortem* lesions of general paralysis. In the opinion of the writer it is present in at least 90 *per cent.* of the cases, and the more carefully the examination of the ependyma is made, the greater will be the percentage of cases showing granulation in asylum *post-mortem* books. In the *Journal of Mental Science*, July, 1905, the writer (1) recorded the frequency of this condition in an analysis of 131 consecutive *post-mortems* on male paralytics at Wakefield

Asylum, and on 112 male and 19 female cases at Horton Asylum. The percentages were 87·8, 90, and 100 respectively. Blatchford (2) (*Journal of Mental Science*, 1903, p. 483) states 70 *per cent.* of paralytics were recorded as exhibiting granular ependyma, and of the non-paralytic deaths 16·6 *per cent.* of men and 5·3 *per cent.* of women. There were 83 paralytic deaths and 369 non-paralytic. The writer is convinced that granularity of the ependyma, especially that of the fourth ventricle, is the most valuable naked-eye diagnostic sign of general paralysis. This statement is supported by that of Bolton (3), who considers the most characteristic naked-eye sign of dementia paralytica to be granularity of the ventricular ependyma, referring specially to the lower half of the fourth ventricle.

Apart from general paralysis, granulations are stated to be met with occasionally in hydrocephalus, in dementia associated with senility or cardio-vascular degeneration, and in some coarse organic lesions. In the writer's opinion one is most likely to meet the condition in cases of progressive senile dementia. In the dementia cases the lateral ventricle more frequently and more prominently exhibits the condition. The writer has, however, observed in the case of a woman, æt. 73, well-marked granulations down to the calamus scriptorius.

Admitting, then, the frequency and importance of the lesion, its nature of formation may be discussed. It is somewhat strange that, considering the vast amount of work in connection with general paralysis, comparatively little attention has been paid to this condition. Thus no mention is made of it in Bevan Lewis's (4) text-book, which devotes much space to the pathology of general paralysis, and only a few lines in the portion of the recent atlas of Nissl and Alzheimer (5) dealing with the histo-pathology of the disease. Ernest Jones (6), in a recent address on the pathology of general paralysis, makes no mention of the ependyma. It is also curious that, notwithstanding the enormous amount of attention given to the examination of the cerebro-spinal fluid, little should be said of the cells lining the cavities in which much of that fluid lies.

Various opinions have been given as to the nature of granular ependyma. Beadles (7) (*Journal of Mental Science*, vol. xli, p. 32), assumes as irritant causes degeneration and proliferation of epithelium, probably causing downgrowths. Then



connective tissue from the neuroglia and the outermost coats of the vessels undergoes active increase, causing wart-like growths on the surface. Pelizzi (8) (*Rivista Sperimentale di Freniatria*, 1896, p. 496) says the granulations are essentially composed of proliferated neuroglia, and surface epithelium plays no part in their formation. Weigert says the granulations are due to the loss of the resistance of the normal epithelium checking the growth of the neuroglia. Bolton thinks that the cholin and nucleoproteid in cerebro-spinal fluid cause an irritative overgrowth, and also that syphilis may play a part. Dagonet (9) ("La Neuroglie dans la Générale," *Soc. Clin. Med. Ment.*, June, 1908) states that the granulations are thickened tufts of neuroglial fibres, which project into the spaces of the cavities, but states that some of the ependymal fibres may play a part in their formation.

Ford-Robertson (10) states that the ependymal granulations are neuroglial, though submitting elsewhere (11) that the granulations in the pia-arachnoid are epithelial.

Before committing one's self to an opinion as to the formation of granulations, a description may be given of the appearance of sections of cases in all stages, from that of normal to that of marked "frosted-glass" granulations. Twenty cases were taken. The stains principally used were Nissl's blue, hæmatoxylin, and Weigert's neuroglia stain.

Normally, the ventricular aspect of the medulla is covered by a layer of epithelium, cubical or cylindrical in shape, the nucleus staining deeply with Nissl's blue, the body of the cell fairly deeply. Underneath the epithelium is a layer containing few nuclei, and consisting mainly of fibres running parallel to the surface. The thickness of this layer varies; it is usually more evident towards the middle line. Thirdly, one comes upon many more nuclei, deeply stained, and the cell-body sometimes showing. This is continuous with the general structure of the medulla, but the cells proliferate to such an extent in some cases that it may be called a layer. In the lateral ventricle it is a distinct thin layer over the grey matter. The principal feature to bear in mind is that there is first epithelium, next a layer with very few cells, then a considerable number of cells.

When the ependyma appears granular to the naked eye many differences appear on section, and in the slighter cases



especially similar naked-eye appearances may be the result of dissimilar microscopic alterations.

(1) Firstly, there may be simple proliferation of the surface-cells, with no downgrowths. There may be seven or eight layers of epithelial cells, those on the surface being dead. This condition alone is rare in the medulla in general paralysis; it is usually accompanied by downgrowths or by budding-out granulations, but in senile dementia there may be simple proliferation only, and in the lateral ventricle in general paralysis. The writer has also noted this epithelial proliferation in a case of melancholia dying of phthisis, but in which there had been syphilis.

(2) There may be invaginations or foldings, giving a wavy or convoluted aspect to the surface, accompanied by very slight or almost no epithelial proliferation. Deep invagination, with very slight epithelial proliferation, the writer has only seen in the lateral ventricle.

(3) Ingrowths, associated with localised proliferation of epithelial cells, are probably the commonest alterations seen in the slighter cases of granularity. A row of cells may grow directly downwards or in a slanting direction. Often at the end of the row is a distinct clump or cluster. On the other hand, a localised aggregation may be just beneath the surface. This later condition may also be observed in senile cases, and there may be no naked-eye evidence of granularity in such.

(4) Sometimes the surface-cells proliferate densely at places, and become more or less arranged in rows. The inner cells tend to have their long axes transverse before any fibres are laid down. At other places, instead of a dense row of cells only, it appears as if the original layer split into two rows, and enclosed between are cells with their long axes parallel to the surface, and with some fibre formation. Elsewhere this fibre formation is still more distinct, and the inner layer of cells, like those on the surface, may or may not persist. The result of this process is to produce a thick fibrous membrane, consisting of rows of cells and fibres parallel to the surface. The external layer of cubical cells may disappear.

(5) Distinct budding-out granulations may be the most evident alteration. The granulation is a projecting tuft which may be entirely covered with the usual surface epithelium, or only partially so, or not at all. Some show surface cells half

way up their sides. Probably trauma is responsible for the loss of the upper part. Occasionally the granulation has a pediculated aspect, and it may even at times resemble somewhat a figure of eight. The interior of the granulation consists of cells parallel to the surface and a few fibres. The cells are usually smaller than those just described in the fibrous membrane formation, and the fibres fewer. Sometimes the granulation appears to consist almost entirely of epithelial cells, arranged in whorls, and with scarcely any fibre formation. Just below the granulation is very frequently a cluster of epithelial cells of the same nature as the surface cells. Often the cluster is obviously the termination of a direct down-growth from the epithelium on the surface, there being a continuous row of cells. Again, one often sees a big cluster at each side of the base of the granulation, and a row or two connecting the clusters. Frequently isolated clumps of epithelial cells which have grown inwards are arranged circularly, appearing like a transverse section of a gland, or like the central canal of the spinal cord. These clusters are also seen not connected with granulations. Often the in-grown cells form a distinct layer, which may extend the whole distance of the surface of the ventricle.

(6) Lastly, an advanced case, with great thickening, may be described. Here we find no cubical cells on the surface, but at once come upon an enormous number of flattened cells and fibres, all parallel to the surface, and arranged very uniformly. The thickness of the layer as a whole varies, being usually very marked centrally, and completely obliterating the V of the lower part of the medulla. The layer may consist of as many as forty rows of these cells. Next we come upon clusters and rows of cells like the original epithelium, and similar to the clusters the result of downgrowth, described previously. The clusters here are so numerous that they practically form a layer, though an irregular one both as regards depth from surface and arrangement. A cluster may be in the midst of the flat cells, but most of them are below. Next is the layer with few cells, which varies much in thickness. At places it may be as thick as the outside layer of flat cells, at others it is very thin. It is to be noted in all these sections that in whatever way the epithelium has altered, whether by forming budding-out granulations or a more

uniform thickened membrane, this layer with few cells is always underneath. The layer is itself certainly increased in thickness frequently.

From these remarks it is evident that one must conclude that in granular ependyma by far the main element is epithelial change. There is proliferation, downgrowth, cluster formation, the laying down by the outer cells of fibres and the cells becoming arranged in layers parallel to the surface. The presence of budding-out granulations or of a membrane thickened generally, depends probably on whether the epithelial change is localised or general. If localised the proliferating cells below shoot the granulation out. The view that the condition is due to ordinary neuroglial overgrowth seems to me untenable. Why should the neuroglia specially bud out beneath the ependyma, and not, say, on the surface of the cortex? In sections stained by Weigert's method one does not see the surface belt of neuroglia turning up into the granulation. Often one can demonstrate the two to be apart, *e.g.*, a row of epithelial cells may separate them. The fibres, however, if present in a granulation, can take on Weigert's stain. Hence the view may be held that these granulations consist of a kind of neuroglia, not formed by outgrowth from the ordinary neuroglia beneath, but, both neuroglia and ependyma being epiblastic, by the ependymal cells practically becoming neuroglia cells as they lay down fibres.

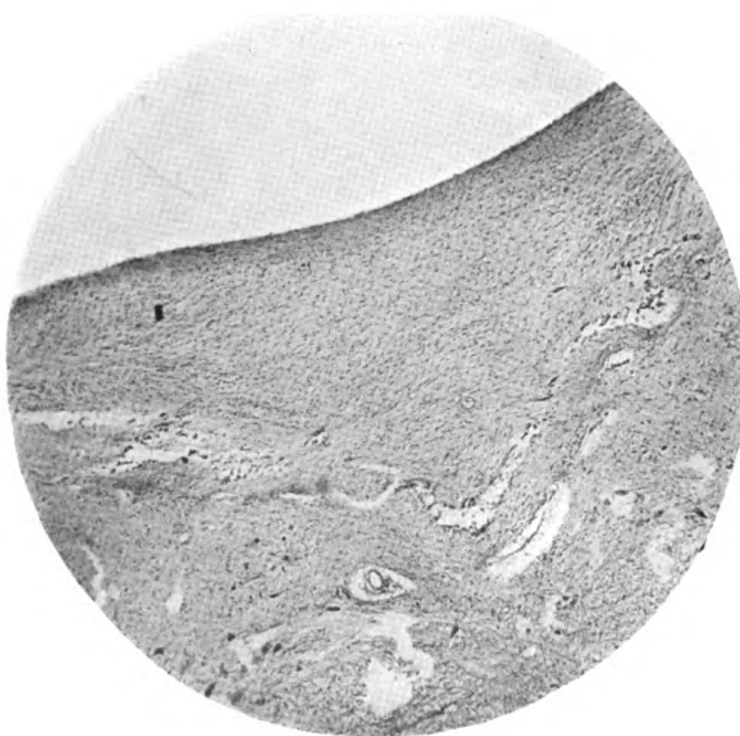
Another point to consider is the primary or secondary nature of the epithelial change. Probably the majority of observers have concluded that the epithelial proliferation is the result of irritative products in the cerebro-spinal fluid. The writer is inclined to believe the condition a primary one. If the lesion were confined to the surface, irritation from the fluid might cause overgrowth, but even that is doubtful. Warts on the hands, for instance, are not caused by external agencies. Further, the granular ependyma is evident, no matter how early the case. It appears more likely that the condition is one of those general proliferative changes which characterise general paralysis, *e.g.*, subdural false membrane formation. Again, these proliferated epithelial cells, many of them arranged like cells of glands, must have a secretion. This secretion probably alters the cerebro-spinal fluid. The secretion may be toxic. The neuroglial overgrowth may be



FIG. 4.



FIG. 5.



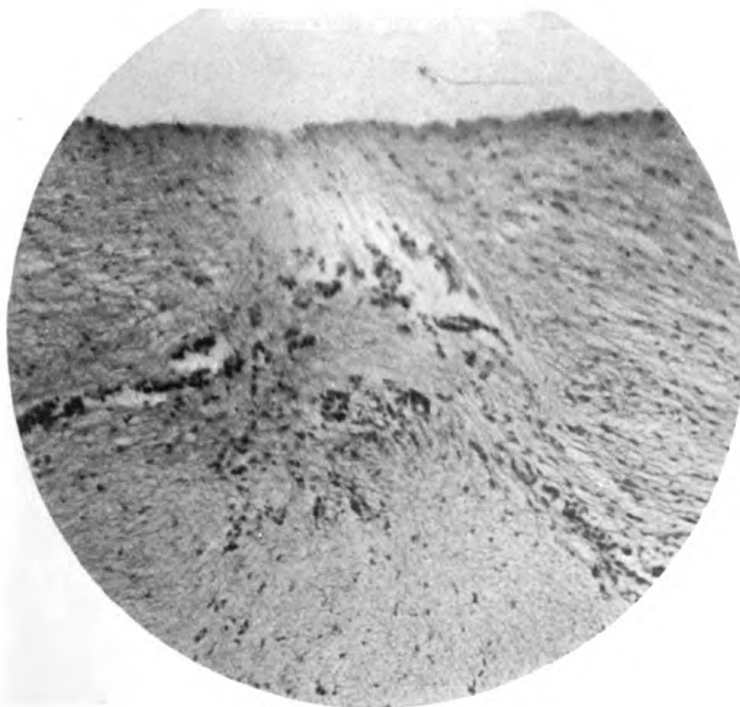
To illustrate Dr. Harvey Baird's paper.



FIG. 6.



FIG. 7.



To illustrate Dr. Harvey Baird's paper.

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the result of this toxic secretion. There appears to the writer thus to be an analogy between cancer and general paralysis. The epithelial proliferation, ingrowth, and formation of clusters are suggestive, coupled with the progressively fatal course of both affections.

## REFERENCES.

- (1) "Statistical Observations on General Paralysis," *Journal of Mental Science*, vol. li, p. 581.
- (2) "Granular Ependyma in General Paralysis," *ibid.*, vol. xlix, p. 483.
- (3) *Ibid.*, vol. liv, p. 40.
- (4) *Text-Book of Mental Diseases*, pp. 548-575.
- (5) *Histologische Studien zur Differenzial-diagnose der progressiven Paralyse von Alois Alzheimer*, 1904, p. 139.
- (6) *Lancet*, No. 4 of vol. ii, 1909, p. 209.
- (7) *Journal of Mental Science*, vol. xli, p. 42.
- (8) *Rivista Sperimentale di Freniatria*, 1896, p. 496.
- (9) "La Neuroglie dans la Générale," *Soc. Clin. Med. Ment.*, June, 1908.
- (10) *Pathology of Mental Diseases*, p. 182.
- (11) *Ibid.*, p. 125.

## DESCRIPTION OF PLATES.

[For these micro-photographs I am indebted to my colleague, Mr. E. Barton White, who devoted much care to their preparation.]

FIG. 1.—An early stage. Note localised proliferation and downgrowth of epithelium.

FIG. 2.—An unusual deep downgrowth in lateral ventricle. Same section exhibits epithelial proliferation elsewhere.

FIG. 3.—Epithelium has grown in, forming a layer, below which the layer with few cells is well seen. Above, the appearance is as if a granulation had sunk in.

FIG. 4.—A granulation under high power. Note the epithelial cells beneath arranged in circular fashion, also clumps of cells showing line of ingrowth.

FIG. 5.—An advanced case, showing enormous epithelial overgrowth, with fibre formation, beneath which is layer of actively proliferating epithelial cells.

FIG. 6.—Another advanced case exhibiting three distinct layers: (1) Epithelial overgrowth with cells arranged parallel to surface; (2) cells actively proliferating; (3) pale layer well seen.

FIG. 7.—The same under high power. Note the acinous arrangement of epithelial cells.

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*The Blood-pressure in Mental Disorders.* By SIDNEY CLARKE, M.A., M.D.Camb., Senior Assistant Medical Officer, Leicestershire and Rutland Asylum.

THE interesting paper by Dr. Turner published in this Journal (1) upon the blood-pressure in the insane has led me to make these few remarks, which I have based upon a large number of observations (2) obtained by Martin's modified Riva-Rocci sphygmomanometer. I attempted besides taking the systolic pressure to estimate the diastolic also, but my results in the latter case were not satisfactory, for so many likely errors were always present.

It has been stated by certain authorities that the blood-pressure varies in certain forms of insanity, being raised in melancholia and lowered in mania, etc. To this Dr. Turner does not agree.

In the first place it must be remembered that the range of blood-pressure in health is very wide. It lies between 100–150 mm. Hg., generally in the neighbourhood of 120 mm. Hg., hence care must be taken before attributing a small rise or fall in the pressure to any particular cause; a change of 10–15 mm. Hg. from the average should at least be present.

I agree with Dr. Turner that in idiots and imbeciles (without epilepsy) the systolic pressure is low, generally lying around the lower limit of the normal range, and it seems natural that this should be so, for these patients often exhibit other signs of defects in the circulation, such as lividity of the extremities or an increased frequency of the pulse-rate, etc. My sphygmomanometric records were quite in keeping with the general bodily condition of the patients.

In dementia of the aged the average systolic pressure lay at the higher limit of the range, and was quite comparable to that seen in healthy old people. Mental dissolution does not seem to directly influence the blood-pressure. In those cases where there was evidence of cardiac failure the blood-pressure was much lower, and in those with arterio-sclerosis I have obtained both high and low systolic pressures, which confirms the opinion that this pathological state of the arteries is not always associated with a hyperpiesis.

Neither in mania nor melancholia did I find any characteristic change in the average blood-pressure, nor was there any constant alteration with recovery unless it was accompanied with a marked improvement in the general bodily health. In patients after an acute phase of excitement, during which active and vigorous muscular movements had taken place, a rise of the systolic pressure was nearly always to be noticed, and this appeared to me to be comparable to that seen in healthy persons after exertion. But sometimes a fall could be registered which could be attributed to fatigue. This was well marked in one of the patients, whose systolic pressure was generally about 110 mm. Hg. This man one very hot day walked at a great rate round the garden until he was tired, and shortly afterwards his blood-pressure had fallen to 76 mm. Hg. Next day the pressure had returned to the average height.

The finer and purposeless movements of the chronic maniac or agitated melancholic do not influence the sphygmomanometric readings to any marked extent. This form of muscular activity seems to be of an almost automatic nature, producing but little energy, and it is conceivable that the muscles do not require any marked alteration in their blood supply.

Changes in the mental or emotional state alone, unaccompanied by marked restlessness or energetic motor activity, as a rule did not influence the average blood-pressure, but occasionally a small rise was observed. I have not noticed any high pressures in cases of confusional insanity.

My observations (extending over a period of one and a half years) confirm in the main those of Dr. Turner, and I do not think that there exists any definite relationship between the various forms of mental disorders and the general blood-pressure excepting in cases of congenital deficiency, when the pressure is as a rule subnormal. The variations which I was able to record in the blood-pressure were for the most part more satisfactorily accounted for by the changes in the muscular activity rather than alterations in the mental states of the patients under observation.

(<sup>1</sup>) *Journal of Mental Science*, July, 1909.—(<sup>2</sup>) "Observations upon the Blood-Pressure in Mental Disorders," Thesis, Camb.



*The Occurrence of Organisms in the Blood and Cerebro-spinal Fluid in Mental Diseases.* <sup>(1)</sup> By WINIFRED MUIRHEAD, L.R.C.P. & S.Ed., Pathologist Royal Asylum, Morningside.

IN the mass of conflicting evidence which has accumulated in recent years as to whether organisms are the exciting factor in the production of certain insanities, I have found it difficult to discriminate between cause and effect. Is the organism or group of organisms the specific pathogenesis of certain insanities or merely a bacteræmia secondary to the psychosis?

My own observations, which have extended over nearly three years, have, if anything, increased this difficulty, and yet have convinced me that there is a great field for further investigation.

Drs. Ford Robertson, McRae, and Jeffrey were the first in this country to state that a diphtheroid bacillus was the cause of general paralysis of the insane, and this bacillus was named *Bacillus paralyticans brevis* and *longus*, being of two types. In later publications Ford Robertson and McRae (1) demonstrated that the probable site of the infective focus was the genito-urinary and lower alimentary canal in tabes, and chiefly in the mucous membrane of the mouth and naso-pharynx in general paralysis. They state that they have also been successful in the treatment of these cases with a polyvalent serum.

Eyre and Flashman (2) have shown that diphtheroid organisms have been isolated in the mucous membrane of the throat of the sane as well as the insane, also in other insanities besides general paralysis.

Lewis Bruce (3), investigating other types of insanity, has shown that in acute insanities with excitement there is a hyper-leucocytosis with an increased polynuclear percentage, and that specific agglutinins are present in the blood-serum of cases of mania to certain types of streptococci rarely present in the healthy sane; at the same time there is an absence in 60 *per cent.* of maniacal patients of a normal protective agglutinin to certain streptococci. Bruce found that the *Bacillus coli* in the intestinal tract was largely replaced by streptococci, these also being excreted in the urine, and he suggests that the toxins formed in the bowel by this overgrowth, and possibly the organisms themselves, as he has succeeded in isolating streptococci from the

blood of some of these insanities, are absorbed into the general circulation and act as a cerebral poison.

Bianchi (4) has isolated a bacillus, and members of his clinic cocci in the blood and meninges of acute delirious insanity, and yet maintains "that it remains to be shown whether such organisms are really pathogenic or aggravating concomitants."

It seemed to me, if an organism existed in connection with general paralysis, and was circulating or invaded the general circulation during a seizure, that although apparently more difficult, the isolation from the blood or cerebro-spinal fluid was of the greatest importance to obtain reliable evidence as to, firstly, whether there was an organism constantly associated with general paralysis, secondly, whether the organism was morphologically identical in each case.

I have not succeeded in achieving my object. I have isolated a bacillus in general paralysis, but also an identical bacillus in other acute insanities. To prevent confusion I shall call this bacillus "Organism A."

During life, from twenty-five cases of general paralysis I isolated an identical diphtheroid bacillus in pure culture in eight from the blood, and in three of these eight from the cerebro-spinal fluid. In four cases I reduplicated my results twice and in one case three times from the blood. Briefly, in 32 *per cent.* of general paralysis I isolated organism A from the blood, and in 7.5 *per cent.* from the cerebro-spinal fluid, as many lumbar punctures were performed.

TABLE I.—*Analysis of Positive Cases of General Paralysis of Insane during Life.*

No.	Stage of disease.	Blood.	Blood-film.	C.S.F.
1	3rd	R <sup>1</sup>	P <sup>2</sup>	R
2	"	R	P	R
3	"	R	—	R
4	"	R	P	—
5	"	R	—	—
6	"	R	—	—
7	"	R	—	—
8	2nd	R	—	—

R, recovery of organism A; P, bacillus present in blood-film; —, negative; <sup>1</sup>, recovery of organism from spleen of mouse by inoculation; <sup>2</sup>, see Fig. 1.

The blood was withdrawn as early as possible after the commencement of a seizure, and it was especially in the early specimens that I succeeded in isolating A from the cerebro-spinal fluid. It is interesting to note that in only two of those three cases did I succeed in isolating A from the cerebro-spinal fluid *post mortem*. In the negative as well as positive cases I repeated the examination two or three times.

From twenty-seven *post-mortems* of general paralysis I succeeded in eight cases, or 29·6 *per cent.*, in isolating a pure culture of organism A. Fifteen of these were examined during life, five being positive, and in one of these cases (see Table II) *Bacillus paralyticans brevis* only was recovered from the cerebro-spinal fluid associated with another bacillus. In only one case did I isolate A from the heart blood.

The *Bacillus paralyticans brevis* was recovered three times or 11·1 *per cent.* from the cerebro-spinal fluid, and twice or 7·4 *per cent.* from the bronchi. On these two occasions organism A was recovered in pure culture from the cerebro-spinal fluid. I have not succeeded in isolating either the *Bacillus paralyticans brevis* or *longus* from the blood or cerebro-spinal fluid during life, and have been equally unsuccessful in isolating diphtheroid bacilli from the urine *ante-mortem*, and urine, intestinal mucous membrane and bronchial glands *post mortem*.

TABLE II.—Analysis of Post-Mortem in General Paralysis.

Posi- tive.	Nega- tive.	C.S.F.	H.B.	Lungs.	Bronchus.	Bron- chial gland.	Intes- tines.	Urine.	Examina- tion during life.
I	...	A	—	—	B.P.B.	o	o	—	o
I	...	—	A	—	—	o	o	—	o
I	...	A	—	—	—	o	—	—	o
I	...	A	o	—	B.P.B.	—	—	—	+ r
I	...	A	—	—	—	o	o	o	+
I	...	A	o	—	—	o	—	o	o
I	...	A	—	—	—	o	o	—	+ r
I	...	A	o	—	—	—	—	—	+ r
...	I	B.P.B.	—	—	—	o	—	—	+ r
...	I	—	—	—	—	o	o	—	+
...	I	—	—	—	—	o	o	—	+
...	I	—	—	—	—	o	—	o	+ r
...	I	—	—	—	—	—	—	o	+
...	I	—	—	—	—	o	—	o	+

TABLE II—*continued*.

Posi- tive.	Nega- tive.	C.S.F.	H.B.	Lungs.	Bronchus.	Bron- chial gland.	Intes- tines.	Urine.	Examina- tion during life.
...	I	—	—	—	—	0	0	—	+
...	I	—	—	—	—	—	—	0	0
...	I	—	—	—	—	—	—	0	0
...	I	—	0	—	—	0	—	0	0
...	I	—	0	—	—	0	0	0	+
...	I	—	0	—	—	—	—	—	0
...	I	—	—	—	—	0	0	0	+
...	I	—	—	—	—	0	0	0	0
...	I	—	—	—	—	0	0	—	0
...	I	—	—	—	—	0	0	0	0
...	I	—	—	—	—	0	0	0	+
...	I	B.P.B.	—	—	—	0	0	0	+
...	I	B.P.B.	—	—	—	0	0	0	0
—	—								—
8	19								15

A, organism A; B.P.B., *Bacillus paralyticans brevis*; —, negative; 0, no examination; +, examination; r, recovery of organism A.

In conclusion, from an examination of fifty-two cases of general paralysis *ante-mortem* and *post mortem* I isolated an identical organism in sixteen of them, or 30·7 *per cent.*, and in five cases, or 9·7 *per cent.*, *post mortem* the *Bacillus paralyticans brevis* of Ford Robertson was recovered. Five of these general paralytics were females, and in only one *post mortem* I isolated A from the cerebro-spinal fluid. This woman was pregnant; the child was born alive at about eight months, with no signs of congenital syphilis, and lived a few hours. No diphtheroid organisms were isolated from the child, and the microscopical appearances of the brain were those of a normal foetus. The only other living child presented some stigmata of congenital syphilis. Sections of the brain of all *post-mortems* were typical of general paralysis.

From twenty-nine cases of other insanities, I isolated organism A from the blood in seven out of twenty cases of delirious insanity, or 35 *per cent.* The twenty-first case of delirious insanity was suffering from enteric fever and the specific bacillus was isolated from the blood twice. All these

patients were acutely ill with rapid pulse, subnormal or raised temperature, and often a hyperleucocytosis. The temperature on admission usually was above normal; the extreme "ill look" of the patient was very obvious.

In many of the cases the cerebro-spinal fluid was examined bacteriologically with negative results, both for organisms and increase of lymphocytes.

I had no opportunity of making *post-mortems* in any of these seven cases.

The blood from four normal male controls proved sterile.

TABLE III.—*Analysis of Bacteriological Examination of Blood in other Insanities.*

Type.	No.	Posi- tive.	Organism.	Nega- tive.	P.M.
Senile insanity with seizures	4	—	—	4	Negative.
Delirious insanity <sup>1</sup>	20	7	Organism A	13	o
" " typhoid*	1	1	<i>B. typhosus</i>	—	o
Excited dementia <sup>2</sup>	1	1	<i>abdominalis</i>		C.S.F. strepto-
Dementia præcox	1	—	Streptothrix*		thrix.
Delusional insanity	1	—	—	1	o
Acute cerebral softening	1	—	—	1	o
				1	Negative.
Normal controls	4	—	—	4	o

o, No examination. x, See Fig. 2. \*, Associated with a delicate diplococcus. See Fig. 4. <sup>1</sup>, Four of these delirious insanities were young women with symptoms of chorea. In one case in particular, a girl, æt. 16, the cause of her insanity being acute rheumatic fever, her condition was such as to give very little hope of her recovery. The blood was withdrawn a few hours after admission, and in the broth culture there were two organisms, A and a delicately growing diplococcus which might have been the *Micrococcus rheumaticus*; unfortunately I lost it at the second subculture. <sup>2</sup>, The patient, a male, although over the usual age for general paralysis, clinically resembled a rapidly progressing one closely. He was so restless that an anæsthetic was necessary both for lumbar puncture and withdrawal of blood. The cerebro-spinal fluid was greatly increased in amount and pressure, the latter possibly due to the high blood-pressure, but no increase of lymphocytes was present and it proved sterile. In the broth culture from the blood there were two organisms, a very delicately growing streptothrix and a coccus. Both of these strains I was unable to cultivate artificially after the first subculture. Three months later I again isolated a delicately growing streptothrix from the fluid of a hæmatoma auris, this time associated with a diphtheroid bacillus of the Hoffmann variety. The former again lost at the second subculture. *Post-mortem* six months later; a streptothrix was isolated in pure culture from the cerebro-spinal fluid, this time a much coarser variety which grew vigorously for a few months and then quite suddenly died. This sequence points to more than a coincidence, and, if only such, is a very interesting one.



*Technique.*—The arm at the elbow is sterilised as for operation; a compress of corrosive sublimate in spirit 1 in 1000 is applied, if in case of general paralysis, immediately on commencement of seizure, and, in case of acute insanities, soon after admission. This soak remains on half-an-hour to several hours according to the time at the disposal. A tourniquet is applied, the soak is removed, a little ether is rubbed over the exposed median basilic vein, and the needle of the syringe is immediately inserted into it; 10 c.c. of blood is withdrawn and at once emptied as equally as possible into three flasks containing 100 c.c. of Bouillon. Care must be taken to have no draught and the operation performed quickly.

For lumbar puncture the back is sterilised in the same way and all other precautions observed. With restless patients it seems to be easier to control them in bed, and if the patient is extremely restless it certainly is safer to give an anæsthetic, as even with a platinum needle there is danger of it being broken.

The syringe used for the blood is graduated to hold 10 c.c.; there are no joints, the point is ground to fit the needle accurately, and the other end drawn out and narrowed is plugged, not too tightly, with cotton-wool, and over this rubber tubing is slipped for suction if necessary. The whole syringe is enclosed in a glass tube plugged at the ends with wool. It is sterilised by hot air raising the temperature to 175 C°.

For lumbar puncture, platinum needles four inches long are conveniently sterilised by hot air in test-tubes, and again, if suction is necessary, Burroughs Wellcome & Co.'s all-glass hypodermic syringe, which has been sterilised in test-tubes by hot air, can be inserted into the needle and suction applied by the withdrawal of the piston. The fluid is collected into sterile centrifuge tubes.

Blood-films are made as soon as possible, the lobe of the ear is gently cleaned with water and ether, and films are made on clean slides or long cover-glasses  $1\frac{1}{2}$  by  $\frac{1}{2}$  in. with cigarette-paper, then stained with either Jenner or Leishman's stain. The broth flasks are incubated at 37° C. for forty-eight hours, hanging-drop preparations are then made, and also plate-cultures of agar or bynohæmoglobin agar 5 *per cent.* If there is a growth in the broth it is always very slight, and in the H. D. will perhaps show a very few small clumps of bacilli.

It is extremely difficult to subculture from the broth, and I have often made two or three plates from one flask, never using less than 1 c.c. of the broth for plating, which I collect in a sterile pipette, and possibly only one of these plates will have a single colony. Subcultured on agar the growth will be feeble for one or two subcultures at short intervals.

At *post-mortems* the brain is removed from the skull, the surface over the third ventricle is seared with a red-hot iron, a sterile pipette is inserted into the ventricle, and 5 c.c. of cerebro-spinal fluid is withdrawn; a certain portion is emptied into broth, while the remainder is emptied into a sterile centrifuge tube. If more fluid is withdrawn the surface is again seared and a fresh pipette is used. Cultures are made on agar and broth from the centrifuge deposit in each tube, and microscopic examination is also made.

*Heart blood.*—The heart is exposed, the surface seared, a sterile knife is plunged into this area, and the blood is withdrawn with a sterile pipette and emptied into an agar and broth.

*Bladder.*—The surface is seared, an opening is made with a sterile knife, the urine is withdrawn by means of a pipette and is emptied into broth. Microscopic examination is also made.

*Lung.*—Pneumonic or other patch is seared, a sterile knife is used to open inner surface, a platinum loop is drawn over the part, and the material is planted on agar and broth.

*Bronchus.*—The upper part of the tube is seared as far as possible with the pointed end of the iron, then a platinum loop is inserted into the tube and the material planted on agar and broth.

*Intestinal mucous membrane.*—The surface is seared, the peritoneal and outer coats are cut, the inner coat is gently scraped with a blunt director, and the material planted in broth.

*Morphology.*—Organism A is a bacillus which belongs to the group of Coryne-bacterium of the diphtheria type. Most commonly a short bacillus with a central segment and somewhat pointed ends, fairly pleomorphic, varying to a long cylindrical bacillus showing two or three segments, clubbed forms and "peg-top" forms, which have a tendency to being curved. Length varies from 1–6  $\mu$ , and in thickness from 0.4–1  $\mu$  at clubbed ends. On liquid media and stained smears the bacilli group in "Chinese letters," clumps, rosettes, or they may lie parallel; occasionally long unbranched threads. In

blood-films I have found them as single bacilli, usually showing central segment, or small groups, and often with the bacilli parallel to each other. Metachromatic granules are also invariably present in twenty-four hours in agar and bynohæmoglobin agar cultures, bipolar, or irregularly distributed, and vary in size. Compared with two strains of typical diphtheria bacilli the granules persisted longer in old cultures and were more irregular in size and distribution. It stains well with all aniline dyes, Neisser positive, Gram positive, but very easily decolourised.

*Pathogenicity.*—Very slightly pathogenic to mice, possibly because of the large dose given relative to the weight of the animal. The first occasion in which I isolated the organism from the blood was by inoculating a broth culture from the blood into a mouse subcutaneously; this animal was killed in six days, and organism A recovered in pure culture from the spleen. A second control mouse was left, and in two weeks it was dying with symptoms of paresis of the left side of the body. No organisms isolated, and owing to an unfortunate accident brain and spinal cord were lost. Testing pathogenicity of thirteen strains of organism A, five of them were pathogenic to mice from one to three days with a dose of 2 c.c. twenty-four hours' broth culture subcutaneously. The mice used were all about the same age, and excepting for two strains those used were over two years old. It did not prove pathogenic to rabbits and guinea-pigs, although with intra-peritoneal inoculation a definite malaise was present lasting from twenty-four to forty-eight hours. The virulence for these animals was not raised by passage through a mouse.

Cultural reactions.

Agar . . . . .	}	Very delicate, flat greyish growth confined to streak; discrete and confluent colonies, "frosted glass" appearance.
Bynohæmoglobin agar 5 <i>per cent.</i>		
Glycerine agar 6 <i>per cent.</i> . . . .	}	Semi-translucent, old cultures dryish. Growth in course of stab small discrete colonies, somewhat beaded appearance, not spreading.
Agar stab . . . . .		
„ plate . . . . .		Very small pin-point colonies, not spreading, flat, dryish, not symmetrically round, $\times 50$ ; granular appearance; periphery wavy, yellowish colour and more dense in centre.

## Cultural reactions.

Blood serum (Loeffler)	.	.	Grows much more feebly than on agar and not a typical growth as with <i>B. diphtheriae</i> .
Potato alkaline	.	.	No apparent growth; fair number of involution forms, short and swollen, not nearly so pleomorphic as with <i>B. diphtheriae</i> .
Gelatine streak and stab 22° C.	.	Grows very feebly.	
Broth	.	.	Clear, fine powdery or slightly flocculent deposit, sticking to tube, acid, later slightly alkaline or neutral. Trace of indol.
Nitrate broth 0.5 per cent.	.	.	As in broth, most strains gave a trace of nitrites.
Lead broth 0.1 per cent.	.	.	No apparent growth; very few strains gave trace of H <sub>2</sub> S.
Litmus milk	.	.	No coagulation, no change, or either slightly acid or alkaline.
Glucose peptone litmus water	1	}	Clear, powdery deposit, acid no pellicle.
per cent.			
Dextrose peptone litmus water	1		
per cent.		}	Clear, powdery deposit, acid with majority of strains.
Saccharose peptone litmus water	1		
per cent.			
Lactose peptone litmus water	1	}	Clear, powdery deposit, acid or alkaline equally.
per cent.			
Maltose peptone litmus water	1		
per cent.		}	Clear, powdery deposit, acid.
Inuline peptone litmus water	1		
per cent.			
Formate peptone litmus water	0.4		
per cent.			
Anaërobic broth.	.	.	} Grows very feebly.
„ glucose formate broth.	.	.	

*Temperature.*—Grows best at 35–37° C., feebly at room temperature, and easily dies at temperature above 40° C. Subcultures made after ten days at 37° C., and six weeks at 22° C. grow very feebly. Subcultures after fourteen days at 22° C. grow well.

Hiss serum water media I have not found satisfactory. Variations were continually present in the cultural reactions with the same batch of media.

As regards vaccines in treatment, these failed to make any difference, and in only one case did I obtain any reaction, *viz.*, a general paralytic, third stage, who had been having small doses of his own vaccine without any result. The dose then



was enormously increased, jumping from 8,000,000 bacilli to 110,000,000; the temperature rose (no local reason), a leucocytosis was present, and mentally he became confused, excited, and dirty in his habits. He slowly returned to his normal condition. No control inoculation of a totally different vaccine, such as staphylococci, was performed.

The opsonic index I found too variable to be able to draw any reliable conclusions.

*Conclusions.*—What is the pathological significance of this organism in these two mental diseases? Is it a causal factor, or is it merely a concomitant? Can we attach any pathological importance to it? Where is the source of the infective focus?

In answer to the first of these questions, if this bacillus is a cause of general paralysis and delirious insanity it is absolutely impossible to ignore the incidence of syphilis in the former, which we therefore must reckon as a predisposing agent, and this predisposing agent must of necessity have the power to give general paralysis the characteristic symptoms which are present in no other type of insanity. Syphilis as a predisposing cause in delirious insanity is a negligible quantity. Now of those two different insanities where I have isolated this bacillus, in one, *viz.*, general paralysis, we assign to the almost invariable predisposing cause of syphilis a most important place, while in the other, *viz.*, delirious insanity, the predisposing causes are acknowledged to be many and varied, and "inherited instability" will possibly be the only condition almost invariably present.

Presuming that organism A is the cause of general paralysis and delirious insanity, it would appear that the predisposing factor of syphilis is a more important factor than the causal agent in the production of the former.

Again, the percentage of cases in which I have obtained this organism in both insanities is comparatively small.

The result of the few animal experiments has not as yet been confirmatory; there is a slight pathogenicity, but the toxicity of the organism appears to be low. Vaccine treatment also did not prove satisfactory.

Therefore I do not consider that I have brought forward sufficient evidence to justify a statement that organism A is the cause of general paralysis and delirious insanity.



In answer to the second and third points raised, it is quite possible that this organism is a concomitant and probably to a certain extent an aggravating one. I obtained it only once in a second stage general paralytic, and this man ultimately progressed rapidly, otherwise it was obtained in cases well advanced where the resistive powers were extremely low, and consequently the invasion of organisms would have been easy. Exactly the same condition holds in the seven cases of delirious insanity who were acutely ill, and I have only obtained this bacillus in such cases.

In the patient suffering from post-rheumatic delirious insanity there were two organisms, and it is quite possible that the diphtheroid bacillus was secondary to the coccus. In another rapidly progressing case, that of dementia with excitement, the organisms were also mixed in the blood and hæmatoma auris. That a mixed invasion should occur points still more to the lowered resistive power of these patients.

In negative cases during life, with one or two exceptions of contamination, the blood was sterile, and *post-mortem* the heart-blood most commonly, and the cerebro-spinal fluid on several occasions, were also sterile.

How can the incidence of the diphtheroid bacillus be explained? I do not know, unless it is possible that this type of bacillus has a certain selective affinity for the nervous system, with the production of a neuro-toxin of low toxicity. The fact that the vaccine treatment was not efficacious rather strengthens the deduction that whatever significance this bacillus has, it probably is of no great importance.

In answer to the fourth point, I have not yet obtained sufficient evidence to determine the source of the infection or to evolve any theories.

#### REFERENCES.

- (1) "Morison Lectures" and others, *Review of Neurology and Psychiatry*, 1906.
- (2) *Archives of Neurology*, vol. iii.
- (3) "Morison Lectures," *Journal of Mental Science*, April, 1908.
- (4) Bianchi, *Text-book of Psychiatry*.

#### DESCRIPTION OF PLATES.

FIG. 1.—Blood-film from a case of general paralysis, made shortly after the commencement of a seizure. Stained with Jenner.  $\times 1000$ .

FIG. 2.—Blood-film from a case of enteric fever, showing two *Bacilli typhosus abdominalis*. Stained with Jenner.  $\times 1000$ .

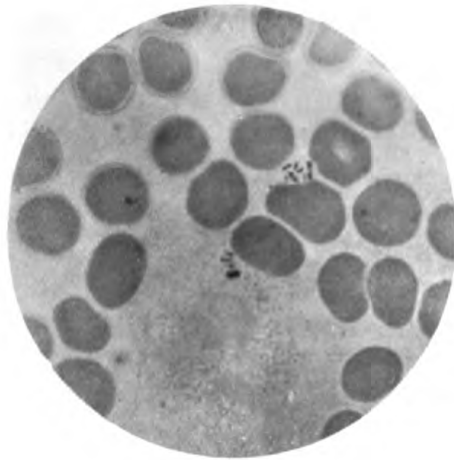


FIG. 1.

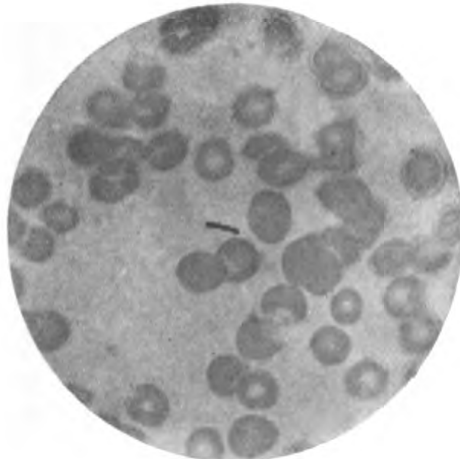


FIG. 2.



FIG. 3.

To illustrate Dr. Winifred Muirhead's paper.





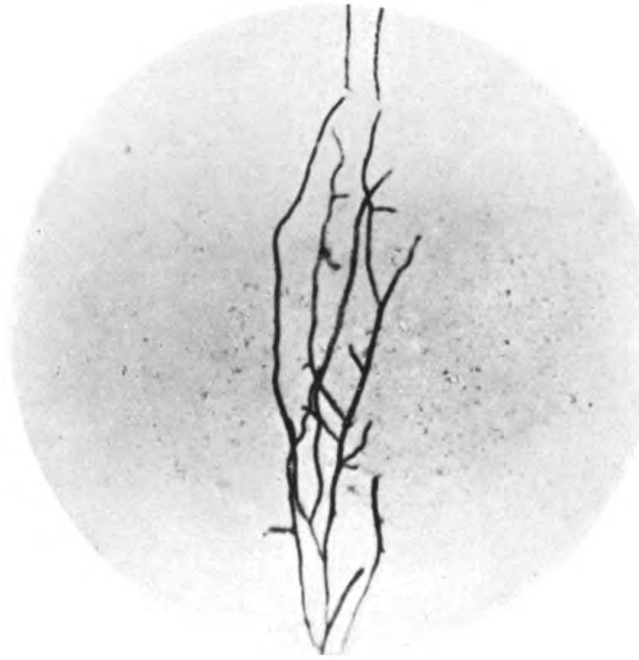


FIG. 4.



FIG. 5.

To illustrate Dr. Winifred Muirhead's paper.





FIG. 6.

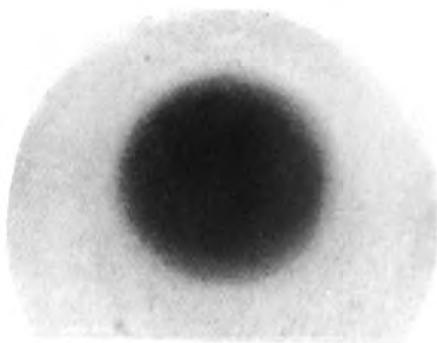


FIG. 7.

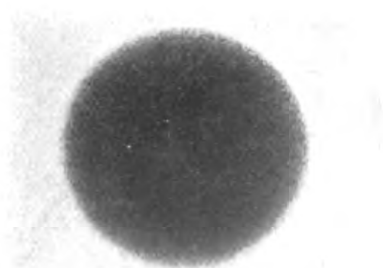


FIG. 8.

To illustrate Dr. Winifred Muirhead's paper.

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FIG. 3.—Film of organism A. Byno-hæmoglobin agar culture 24 hours. Stain carbol methylene blue.  $\times 600$ .

FIG. 4.—Film of streptothrix. Plate culture from fluid of hæmatoma auris; byno-hæmoglobin agar 48 hours. Stained fuchsin.  $\times 1000$ .

FIG. 5.—Culture of organism A on byno-hæmoglobin agar 48 hours. Photo from drawing.

FIG. 6.—Colony of organism A. Plate byno-hæmoglobin agar 24 hours.  $\times 60$ .

FIG. 7.—Colony of *Bacillus paralyticus brevis*. Plate byno-hæmoglobin agar 24 hours.  $\times 60$ .

FIG. 8.—Colony of *Bacillus paralyticus longus*. Plate byno-hæmoglobin agar 24 hours.  $\times 60$ .

(1) The essay for which was awarded the second prize of the Medico-Psychological Association, 1909.

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## Occasional Notes.

### *The Superannuation Act.*

After many years of effort the Superannuation Bill has passed into an Act of Parliament, and although not fulfilling the aspirations of the most sanguine, it is to the majority of prospective pensioners a most satisfactory solution of a previously unsatisfactory problem.

The gratitude of the Association is especially due to Sir William Job Collins, whose reputation and skill alone assured its passage through the House of Commons. It is perhaps not too much to say that in the hands of any other member of Parliament it would probably have failed.

To Lord Monk-Bretton an almost equal amount of thanks are due for his skilful pilotage in the troubled waters of the Upper House.

Dr. Shuttleworth's exertions have been beyond all praise, nor can there be any doubt that the weight of the Asylum Workers' Association greatly strengthened his indefatigable exertions.

The Association, too, must not forget the less conspicuous but by no means unimportant labours of the Parliamentary Committee. The steady work of this body for many years past contributed most importantly to the collection of facts and the formation of opinions, constituting the ground work on which the Bill was built.

Thus ends in a most satisfactory manner one of the most

important objects for which this Association has striven during the last thirty years. The energies that have been so long occupied in this matter are now free to be used in other directions. The existing state of the Lunacy Law offers many opportunities for their employment, and no doubt some of these will soon be absorbing the activities of that most valuable body, our Parliamentary Committee.

A report of the Commemorative Dinner, which took place on December 20th, 1909, appears in this number of the Journal.

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*The Section of Psychological Medicine at the British Medical Association at Belfast.*

This Section, held under the Presidency of Dr. Outtersen Wood, appears to have been one of the most successful meetings in recent years.

The President, in opening the Section, took for his text the desirability of promoting a much closer connection between psychiatry and neurology, and the Section, after discussion, passed a resolution recommending to the Council the desirability of having a combined Section at future meetings, to be called "The Section of Psychological Medicine and Neurology."

This resolution, we believe, has been adopted by the Council, and it will be interesting to observe the results of this new departure. The President's view that it will be of advantage to both these departments of medicine will probably be amply verified.

Dr. Mercier contributed a valuable and interesting paper on somatic delusions and local lesions. Dr. Shuttleworth's paper on Mongolian imbecility was also of great interest both for its subject-matter and its illustrations. Dr. MacCormac contributed a paper on the superficial and deep reflexes in relation to various forms of mental disease, which possessed the merit of much originality of observation. Dr. Crothers' paper on heredity in the causation of inebriety was a useful addition to this aspect of the subject. The report of the Royal Commission on the Care and Control of the Feeble-minded was very ably brought under consideration by Dr. Dawson.

Abstracts of these papers were published in the *British*

*Medical Journal* of September 11th, and are evidence of the valuable work of the Section.

The Section also passed a resolution commending the Superannuation Bill, and another drawing the attention of the National University and of the Queen's University to the desirability of establishing lectureships in mental diseases.

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*Sir James M. Moody.*

The honour of knighthood conferred on Sir James M. Moody will be appreciated by every member of the specialty as a recognition of its claims to a share in the distinctions so liberally awarded in several of the public services and so parsimoniously allotted to others.

Every member of the Association will concur on personal grounds in congratulating Sir James on his hardy earned and well-deserved distinction, and join in wishing him a long enjoyment of his honour.

The marvel, however, is not that one member of the specialty has received such distinction, but that it has not been extended to many more. The management of great institutions of two thousand patients and upwards certainly demands a degree of ability and capacity for protracted service such as is required of few officials of Government departments in which honours are obtained almost as a matter of course.

In each of the three kingdoms are to be found men who, in the midst of their arduous and successful administrative work, have found energy for literary and scientific activity, not infrequently associated with teaching in universities and medical schools. It is to be wished that some of the honours, often won by mere routine departmental drudgery, might find their way to the encouragement of these splendid workers.

The honour conferred on Sir James Moody may be considered as an omen of a wider recognition of public merit, which has been hitherto too largely limited to those servants of the Crown more directly in touch with the national exchequer.



*The Library.*

The Library of the Association, to which especial attention is again drawn by a notice in "Notes and News," is worthy of more support than has been hitherto accorded to it.

The members of the Association are scattered in isolated groups of two and three throughout the country, a large majority of them being remote from access to any considerable scientific library. Under such circumstances, if the scientific spirit is to be encouraged and developed, it is absolutely essential that opportunities of seeing and consulting the best and most recent scientific works and periodical publications is absolutely essential.

The individual members of the asylum staff cannot do this without an outlay, which would be a very serious sacrifice of income; neither can the governing body of the individual asylums be expected to make such an expenditure.

A subscription to such a library as Lewis's will no doubt give a supply of current works, but cannot supply the more serious works and periodical literature which are of greater importance.

The problem for the circulating library of the Association is principally this of providing the periodical literature. The Journal receives a considerable number for review, but hitherto these have been used up in the reviewing. It is hoped that many of these will be available in future for the Library, but they will probably not be usable during the current year of issue.

An ample supply of periodicals might be obtained if asylum committees would make a small grant for the purchase of such periodicals, and if the asylums would form themselves into groups (divisional or otherwise) so as to prevent too much re-duplication. These might then be available for circulation amongst the asylums of the group or division at an early date. At the end of the year they might either be added to the asylum library or be sent as a contribution to the central library. The cost of such an arrangement to each asylum would be so small that even if a grant in aid could not be obtained from the committee, it might be collected by subscription from the committee members or even by the joint subscrip-

tions of the staff. The latter at the present time probably make an outlay which would more than cover this co-ordinated expenditure.

The library funds would by such an arrangement be set free to obtain by purchase all really important books as well as to make such a subscription to Lewis's as would make the more ephemeral and doubtful books available to members in every part of the country.

The scientific spirit of the Association would be greatly encouraged by such an arrangement, and in the course of time, by gifts and bequests, in addition to the sources of acquisition above indicated, the Association would become the possessor of a library *nulli secundus* in its special subjects, in which its members might have a justifiable pride.

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*Forcible Feeding.*

The long and acrimonious discussion in the *Times* on the question whether Sir Victor Horsley introduced the suggestion of an alternative to nasal feeding in the trial relating to the forcible feeding of a female prisoner, is of little interest to the readers of this Journal.

Sir Victor's description of nasal feeding as "disgusting," "barbarous," and "brutal," in so public a manner, certainly calls for comment. In asylums this procedure is daily necessitated, and it is desirable that our patients and their friends should not be encouraged to view this method of treatment in this light, since many of them would be seriously prejudiced thereby. "Disgusting," if applied to the quality of the food, is certainly erroneous, since this is commonly of the very best kind. "Brutal," if it refers to the mode of feeding or the intentions of the feeders, is also unwarranted in regard to a procedure that is only resorted to in the best interests of the patient. "Barbarous" is certainly not a true description of a mode of treatment employed in the most modern hospitals. Sir Victor Horsley admitted that he had used it, and would use it if necessary. Is he therefore barbarous?

These epithets are certainly not merited by nasal feeding as practised in our hospitals and asylums, and were intended, we must assume, to apply to the circumstances of the particular case. It is desirable that this should be made perfectly clear.

The feeding of a starving person, whether insane or suffering from temporary aberration, due to emotional debauchery in political excitement, is certainly legitimate medical treatment; the method is warranted by scientific knowledge, and the intention of its use has the sanction of the highest benevolence, which cannot be affected by any circumstances of a political character.

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## Part II.—Reviews and Notices.

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### *The Sixty-Third Report of the Commissioners in Lunacy, 1909.*

The Report opens with a succinct summary of the recommendations made by the Royal Commission on the Care and Control of the Feeble-minded (1908), on which numerous remarks and suggestions are made.

The suggestion is made that provisions similar to those contained in Sections 14, 16, and 18 of the Lunacy Act of 1890 will need to be retained to prevent "an unnecessary increase in the number of cases requiring the order of a judicial authority to be made on petition supported by two medical certificates."

The Commissioners express their concurrence in regard to the examination into the mental condition of persons in whom, whether convicted or acquitted, any question of mental defect may be raised.

If the Chancery Division of the High Court of Justice becomes the authority relating to the management and administration of mental defectives, the Commissioners express the hope that some attempt should be made to cheapen the procedure.

The amalgamation of the Chancery Masters with the Lunacy Commissioners is also supported, and it is urged that the recommendation for the immediate appointment of two additional medical commissioners should be carried out. The necessity that the Commission should be predominantly medical is insisted on.

The suggestions for increased facilities for the treatment of incipient and unconfirmed insanity and for the advance of scientific investigation are also warmly supported.

The Commissioners state that the recommendation that an architect should be appointed in connection with the Lunacy Board has been already carried out. This would seem to indicate that the treatment by bricks and mortar still takes precedence to that by medical science in the opinion of the Treasury. The delay in appointing the additional medical commissioners is a scandal, which should overwhelm with confusion and shame any representative body that possessed the faintest perception of responsibility or the least glimmering of a moral conscience.

The Commissioners also recommend that the "present disqualifi-

cations should be relaxed to enable leading members of the medical profession to become honorary commissioners." The fact that such persons are specially disqualified reads like an extract from *Alice in Wonderland*. What mental perversion or obsession could have induced the original framers of these regulations to arrive at such an absurd and irrational decision?

The Commissioners strongly support the extension of the boarding-out system, and the placing it under proper supervision. They warmly endorse the proposal for the establishment of observation wards, reception houses and mental hospitals for incipient mental disorder. They recommend the extension of the clauses in the Lord Chancellor's Bill of 1900, relating to the notification and registration of cases of unconfirmed insanity, to cases received in such observation wards, etc. This would be a large question, requiring very careful consideration and adjustment.

Finally, the Commissioners very properly protest against their body, however modified, being made a sub-department either of the Home Office or of the Local Government Board. This is a position that should be strongly defended by all who care for the welfare of the defective minded.

The statistics of the Commissioners show a total of 128,787 persons certified as insane in England and Wales, this being an increase of 2,703 during the year 1908. The increase is 333 in excess of the average of the decennium, and 386 in excess of the quinquennial period. The result is that at the close of 1908 there was one insane person to every 278 of the population—the highest ratio that has ever been recorded.

This depressing fact is to some extent ameliorated by the statistics of first admissions; these were 5.10 per 10,000 in 1908, which is considerably lower than the 5.52 of 1902, although contrasting unfavourably with 5.02 in 1907, and is only a fraction lower than the 5.11 of 1906.

The admissions were 384 in excess of 1907, the ratio per 10,000 being 6.29 as compared with 6.26, and being lower than the same ratio in any year since 1901.

The recovery-rate on the total of admissions was 35.38, being 1.31 lower than 1907, and 1.84 below the average for the ten years 1899 to 1908 inclusive. The death-rate was 9.53 on the daily average number resident, being .46 below the average for the decennium. These two factors are important elements in the increase of the insane population during the year.

The mortality, for males 107.5 and for females 88.2 per 1,000, when contrasted with that of the general population (16 and 14.1 respectively), show that there is still a large possible accumulation from further diminution of the death-rate.

The Report draws attention to the new tables in connection with causation, and, while insisting on its value, wisely abstains from drawing conclusions on so complex a subject from the results of a single year.

A diagram of the relationship of the forms of insanity to each age-period is of distinct interest, and will form a valuable means of comparison with the occurrence of insanity in future years.

An analysis, with chart, of the causes of death shows that malignant



diseases and bronchitis are nearly three times, and apoplexy half, as frequent in the insane as in the general population, while fatty and valvular disease of the heart, epilepsy, pneumonia and phthisis are largely in excess.

Allusion is made to Dr. Maudsley's munificent offer of £30,000 to be applied to the establishment of a hospital for incipient and unconfirmed insanity. The suggestion is made that the clauses in the Lord Chancellor's Bill, previously referred to, should apply to the inmates of such a hospital. It must be regretted that this piece of legislation has not been effected, in anticipation of the establishment of such institutions.

Model rules (pp. 36 and 37) are given for the taking of stock and the auditing of accounts in asylums. These should materially aid in the prevention of the "scandals" that have from time to time vexed committees of management.

Dysentery and diarrhoea receive very considerable attention, as in previous years, but the statistics for the year do not show any marked general amelioration.

Dr. Mott's summary of the conclusions of his study of the incidence of tuberculosis in the London County Asylums is quoted in full. The general adoption of his recommendations should lead to considerable reduction in this source of mortality.

The Commissioners again report that several of the registered hospitals fail to adequately discharge "their primary function of receiving and maintaining at low rates of payment patients of education and refinement, but of limited means, who would feel acutely the surroundings and association of a county asylum."

Does the hope expressed, that these institutions would "voluntarily" bring themselves up to the "high standard of liberality" attained by some of them, imply a possibility of other means being employed to attain this very desirable end?

The supplement on scientific research work in asylums gives a record of very satisfactory progress in this respect. The good results of this supplement will, however, become more obvious in the next year or two.

The new statistical tables must have added largely to the work of the already over-burthened Commission, and this will not be lessened as time goes on. It is sincerely to be hoped that before the next report is printed the Commission may have been strengthened by additions to its *personnel*, which will enable it to grapple with some of the many forms of work that are needing attention. The recent Royal Commissions ought to have impressed even a British House of Commons with the desirability of giving much greater attention to the national health.

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*The Fifty-first Annual Report of the General Board of Commissioners in Lunacy for Scotland, 1909.*

On January 1st, 1909, there were in Scotland 18,197 registered insane persons of whom the Board had official cognizance. Of these, 2,682 were maintained from private sources, 15,464 by parochial rates,



and 51 at the expense of the State. The total increase during the past year was 289, as at January 1st, 1909.

The general results during 1908, as compared with 1907, are, in regard to *registered* lunatics, as follows: (1) There was a total increase of 267, due to an increase of private patients by 44 and of pauper patients by 223. (2) The total increase of 267 arose from an increase of the number in establishments by 229, and by an increase of the number in private dwellings by 38. (3) The increased number of 229 in establishments arose from an increase of 52 private patients and of 177 pauper patients. Of pauper patients in establishments, the average increase during the preceding five years was 175, so that the increase of 177 during the year 1908 has been nearly the same as the average increase of that quinquenniad. (4) All pauper lunatics in establishments continue to be provided for in institutions of a public character.

In the number of non-registered lunatics the following changes occurred during 1908:

In the Criminal Lunatic Department of Perth Prison the number is two more than last year.

In training schools for imbecile children the number is twenty more than last year.

The total increase in this Report is now shown to be 12,373 persons as compared with 5,824 persons, on January 1st, 1858.

The following tabular statement shows the proportions of the insane in Scotland per 100,000 of the estimated population as at January 1st in the past twenty-four years:

Years.				Private patients.	Pauper patients.	Total.
Average of 5 years.	1886-90 . . . . .			43	247	290
	1891-95 . . . . .			46	267	313
	1896-1900. . . . .			49	288	337
January 1st, 1901 . . . . .				50	299	349
" 1902 . . . . .				50	303	353
" 1903 . . . . .				50	308	358
" 1904 . . . . .				52	307	359
" 1905 . . . . .				52	311	363
" 1906 . . . . .				51	312	363
" 1907 . . . . .				50	312	362
" 1908 . . . . .				51	314	365
" 1909 . . . . .				51	315	366

The above statement shows that the number of private patients in proportion to the population slightly fluctuated of recent years, but the pauper patients still tend to increase. It is to be noted, however, that the increase in the past year, from 365 to 366 per 100,000, was due to accumulation as the number placed on the register for the first time fell below that of the preceding year by 105. But for a decreased rate of removal by discharge and death there would have been a decrease of the total number on the Register. The Commissioners state that the

Register does not, of course, include a large number of persons of unsound mind in Scotland who might be brought under official cognizance consequent on administrative changes, thus increasing the amount of registered lunacy without any change in the actual proportion of mental unsoundness in the community.

The Commissioners conclude that the rise in the proportion to the total population from 1893 onwards may be held to coincide generally with the extensive development of the hospital side of asylums, and either as cause or effect with their more perfect equipment for the reception, classification, and treatment of persons of unsound mind who would not formerly have been placed in asylums. This influence has, however, apparently reached its greatest strength, and has fallen, consequently representing a positive decrease of occurring insanity in forms calling for certification.

Having regard to the numbers registered for the first time, the proportion to population has fluctuated within somewhat narrow limits for the thirty-five years now concluded, and is now lower than it was in 1875 as regards private patients; but the pauper patients rose in proportion up to 1902, when it attained the maximum of 52·6. It has since fallen throughout the last five years to 50·5, 47·9, 45·1, 48·3, and 46·6. The Commissioners regard these figures as trustworthy regarding the registered insane, especially regarding the pauper class.

There would seem to be an increase in the number of voluntary patients who are admitted to asylums without disagreeable or troublesome formalities. The Commissioners favour a change in the law which would permit of a person being received into and kept in an asylum for three days on his own written application to the Superintendent, provided the sanction of the Board be at once applied for in the usual way on admission, and that no voluntary boarder be retained for any longer period than three days without such sanction.

The recovery-rates, excluding transfers, were much the same as in the former year—38·4 for private patients and 40·5 for pauper. While the proportion of recoveries among private patients has varied from one year to another it has shown no certain indications of falling off, unless the lowest point reached during the last two years be regarded as such. Among pauper patients a continuous decrease is recorded between 1880–84 and 1900–04, and in the past four years a tendency towards a still further decrease appears to be in force. The recovery-rates have, no doubt, in recent years been unfavourably affected by the increased use of observation wards connected with the parochial hospitals of several large parishes, which receive persons suffering from passing attacks of mental disorder, of whom some, in the absence of such wards, would have been removed to asylums, and would have been discharged recovered shortly after admission. But the lowering of the rate is probably to be mainly ascribed to the accumulation of chronic patients, and to the fact that the development of nursing and the improved means of hospital care in asylums have led to their being more freely used for the reception of patients whose age and whose mental and physical condition are such as to preclude hope of recovery. Persons in moribund states, or suffering from incurable physical diseases, complicated with mental unsoundness or decay, are now sent

to asylum hospitals instead of being sent to ordinary infirmaries, or of being kept at home until death takes place, and returns obtained last year prove conclusively that of late years the number of persons admitted at ages so advanced as to render recovery almost impossible has largely increased.

The new arrangements for the treatment of incipient insanity in the Royal Infirmaries of Edinburgh and Dundee will, no doubt, in time also have an effect upon the recovery-rate.

The death-rate for the year was rather lower, as is shown by this table :

Classes of patients.	Proportion of deaths <i>per cent.</i> of number resident in all establishments.						
	1890-94.	1895-99.	1900-04.	1905.	1906.	1907.	1908.
Private patients . . . .	7.6	7.2	7.9	8.2	9.1	8.4	7.3
Pauper patients . . . .	8.7	8.5	9.2	9.6	9.5	9.8	9.3
Both classes . . . .	8.5	8.2	9.0	9.4	9.4	9.6	8.9

As regards pauper patients, the lower admission-rate must have contributed in some degree to this result, the mortality during the first year of admission being always very high.

We are glad to observe that the number of attendants and servants who left for one reason or another was 164 less than the number for the previous year. Those who resigned voluntarily numbered 123 fewer. No doubt the assurance of pensions now granted by the legislature will have a favourable effect on the service and render these changes fewer. There is, however, so much unrest in the domestic class that it would be well to discriminate between the attendants and servants in these returns. Asylum artisans are largely a class enjoying fixity of tenure and slow to move, whereas kitchen and laundry servants are just as difficult to retain. The Commissioners again recur to a recommendation, which is having careful consideration already, and will no doubt result in an improved state of matters. They recommend that the administrators of institutions in which changes among attendants occur frequently should inquire carefully into the causes. Experience tends to show that in the case of men a high class of attendant and security for permanent service are best obtained by increasing the number of married attendants, and where comfortable cottages for married attendants are provided for such of the staff as do not necessarily require to sleep in the asylum. The great bulk of the changes occurs in the case of attendants and servants who have only been a short time in asylum service. As the number of attendants and servants who resigned voluntarily constitutes 75 *per cent.* of the whole number of changes during the last year, it may be inferred that, although the inducements to enter asylum service are not pecuniarily unattractive to those who seek employment, a large number find the service on trial

not to be congenial. This may be due in part to the trying nature of the service, and possibly still more to the general want of freedom inseparable from the discipline of a large institution, which causes a preference to be given to employments, perhaps less well paid, in which the workers' time, after certain hours, is wholly at their own disposal.

The year is marked by the resignation of Dr. Rutherford at Dumfries, and Dr. Clouston at Edinburgh. Both were granted handsome superannuation allowances. Their successors are Dr. Easterbrook and Dr. G. M. Robertson. Dr. McNaughtan has also resigned on pension, and has been succeeded by Dr. Sturrock in the Criminal Lunatic Department of H.M. Prison at Perth.

The private and pauper patients provided for in private dwellings during the year show some increase, the latter class on January 1st having numbered 2,826 as compared with 2,780 on the corresponding date of the previous year. The record of the year is as favourable as usual.

The Commissioners again urge that the poorer class of the private insane should be accommodated in the district asylums, and not be subject to removal whenever their beds are required for the rate-supported class.

The following extract from the Report has a special interest at the present time when the Poor Law has been cast into the melting-pot, and our legislators are face to face with new recommendations regarding the feeble-minded and the inebriate. No doubt the Association will consider these weighty reports in due course, and it is well that we should reproduce these suggested amendments as specially affecting Scotland.

The main respects in which the Board think that the existing (Scotland) Acts stand more immediately in need of amendment are briefly indicated in the following suggestions :

"To amend the term 'lunatic,' which is at present defined to be a person 'certified by two medical persons to be a lunatic,' etc., whereas the term is often employed in the Acts to persons who from the circumstances of the case cannot have undergone certification as lunatics ; also extension of the definition so as to embrace imbeciles who are wholly or partly unable to earn their own living on account of mental defect, thus bringing within the scope of the definition a large number of persons of unsound mind already on the register of the Board, and otherwise extending the scope of the definition in a desirable direction.

"To amend the term 'house,' which is defined at present as 'any house in which a single lunatic is kept under an order of the Sheriff,' thus rendering the term inapplicable to houses in which patients are kept under sanction of the Board, which is now, in point of fact, the only authority used in such cases, and also rendering it inapplicable to a house in which an insane person may be kept, contrary to law, without either a Sheriff's Order or the sanction of the Board.

"To amend the provisions relating to the acquisition of land by district lunacy boards, these provisions being at present expressed in such a way as to leave the powers of district boards on the subject a matter of some uncertainty.

"To enlarge existing provisions with regard to the powers of the Board



to make regulations so as to enable the Board, with the approval of the Secretary for Scotland, to make regulations for the good order and management of all establishments for the insane in Scotland; and also to provide that plans for all such establishments shall be submitted to the Board and receive their sanction before being put into execution.

"To enable the Board in all cases to determine the number of patients which may be received into any establishment for the insane, and to provide that no larger number shall be received without the Board's sanction.

"To give directors of Royal asylums and district boards of lunacy permissive power to grant superannuation allowances to officers, attendants, and servants in their employment to the same extent and on like terms as are given by the laws of England in the case of county and borough asylums, and of Ireland in the case of district asylums.

"To provide for the audit of the accounts of district boards of lunacy by placing such boards in that respect upon the same footing as county councils.

"To amend the provisions for the election of district lunacy boards (at present contained in the Prisons [Scotland] Act, 1877), and to provide for the representation of parish councils on such boards.

"To extend the provisions with regard to the reception of private patients into district asylums, so as to enable district boards, if they see fit, to make separate provision for the accommodation of private patients at low rates of board, and to give such of these patients as belong to the district security against removal to make room for pauper patients.

"To give the Commissioners extended powers in the matter of visiting any establishment or house into which they have reason to believe that persons, not being persons under the care of their natural guardians, are resident on account of mental disorder or defect, and without legal authority.

"To do away with the certificate granted after the first three years of residence have passed and annually thereafter, which is at present necessary in order to keep in force the sheriff's order in the case of patients in asylums; and to put upon a more clear and satisfactory footing the provisions in regard to the discharge of patients.

"To extend the existing provisions for the protection of insane persons not kept for gain, who are harshly or cruelly treated, or are subjected to restraint or coercion, so as to cover also the case of those who are seriously neglected, or are inadequately protected from sexual danger.

"To provide against the removal from the poor-roll of pauper patients for whose removal to an asylum, or to another house or guardian, the Board have issued an order.

"To provide that when a patient in an asylum has been removed with the sanction of the Board to the lunatic wards of a poorhouse, or to a private house, and still remains on the Board's register, he may be transferred back to the asylum, with the sanction of the Board, and be received therein in virtue of the original sheriff's order for reception.

"To amend the provisions for the protection of female patients in asylums, and in private houses under sanction of the Board, their pro-



tection not being adequately provided for either by the existing Lunacy Acts or by the Criminal Law Amendment Act of 1885.

"To enable district lunacy boards to erect, or to combine for the erection, of institutions for the care of idiot or imbecile children supported by parishes.

"To secure that applications to inspectors of poor on behalf of idiot or imbecile children shall be carefully considered, and shall not be rejected without adequate reasons, and that when such young persons are provided for in institutions for idiot or imbecile children they shall not be removed from supervision on being discharged after attaining eighteen years of age, but shall remain under charge of the parish council until such time as the Board have assurance that they will be satisfactorily provided for otherwise.

"To empower parish councils to combine in making arrangements for the boarding out from asylums of pauper patients, and for their subsequent supervision and visitation, thus enabling the smaller parishes in combination to attain success in this direction such as is attained by the large urban parishes.

"To provide that in the case of uncertified insane persons who are to be placed under private care, or in the lunatic wards of poorhouses, it shall be lawful for the Board to grant their sanction, and to register the patient on one certificate of insanity, and without any further certification of lunacy.

"To provide that a person desiring to enter an asylum as a voluntary boarder may be received on his own written application, but may not be kept for more than three days without the written authority of a Commissioner in Lunacy.

"To provide that, as regards the receipt and transmission of letters to and from patients, the sheriff of the county in which an asylum is situated shall be put in the same position as the Board; and that the provisions of the Act in regard to visitors to patients shall be placed upon a somewhat wider basis than is the case at present.

"To provide that the powers of the Board to initiate steps for the appointment of judicial factors shall not, as at present, be confined to persons who are being 'detained and taken charge of as lunatics,' since that description is as likely as not to be inapplicable to persons unable to manage their affairs on account of mental defect.

"To provide for the more certain determination of parishes to be held chargeable with the maintenance of insane prisoners sent to asylums; to provide for their reception by asylums serving as district asylums; and to provide that in the case of such prisoners undergoing sentences, the order for their reception into an asylum shall not lapse on expiry of the term of sentence, as is the case at present.

"To provide that pauper patients for whose removal from Scotland an order is sought need not personally appear in court, as is necessary at present, in obedience to certain provisions of the Poor Law dealing with paupers whose removal is sought, which make no exception in the case of lunatics.

"To provide that in the case of lunacy districts consisting of a single parish or combination, the parish council shall be empowered to levy and collect lunacy assessments for providing and altering asylums,

along with the assessments for relief of the poor. At present these lunacy assessments are levied and collected by the burgh or county authorities within such parish, and the change here referred to is sought by the corporations of the larger burghs, and is concurred in by parish councils in such burghs almost without exception.

"To provide that letters of agreement as to the rate of board to be paid for non-pauper patients received into asylums shall be sufficiently stamped with a sixpenny stamp. Hitherto a sixpenny stamp has been regarded as sufficiently stamping such an agreement, but founding on a recent decision, the Inland Revenue authorities have held that these agreements are liable to a bond duty at the rate of 2s. 6d. per each £5 of the annual rate agreed upon, which lays a heavy additional burden upon a family in which the misfortune of insanity occurs.

"To provide that district boards of lunacy shall have power, for the purpose of obtaining instruction and assistance in pathological investigation for medical officers of asylums under their charge, to make annual contributions towards any pathological laboratory having for its object investigation into the pathology of mental diseases.

"To enact for Scotland a provision in terms of Section 330, Sub-sections (1) and (2) of the English Lunacy Acts 1890-91, for the protection of medical persons against proceedings in respect to certificates of lunacy granted in good faith and with reasonable care.

"These suggestions, being of the nature of amendments of existing laws, do not deal with what may be termed the main recommendations of the Report of the Royal Commission on the Care and Control of the Feeble-minded, but, as has been said, they include many important recommendations of that Commission. Many of the proposals made above are such as did not fall within the scope of that Commission's report, but all of them are, we believe, in harmony with the spirit of that report, and their passing into law would in no way interfere with or render more difficult the adoption of other measures recommended by the Commission that may in future be the subject of legislative consideration.

"These proposals involve provisions which are, in our opinion, urgently needed to place the lunacy law of Scotland on an efficient and satisfactory footing, and we venture to express the hope that a bill giving effect to them will be introduced into Parliament at an early date."

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*Fifty-eighth Report of the Inspectors of Lunatics in Ireland for the year ending December 31st, 1908.*

IN this, their latest report, the Irish Inspectors have not quite as satisfactory a tale to tell as in either of their two previous reports, the increase of the total amount of insane in establishments having been greater in 1908 than in 1906 or 1907, the increase for the three years being respectively 189, 164, and 213. The last figure, however, is less by 200 than the average increase for the preceding ten years, so that there is not really much to arouse apprehension as regards the increase of insanity. The total number of insane in establishments on December 31st, 1908, was 23,931.

If we divide the twenty years ending 1908 in four five-year periods, and calculate the average number of insane under care for each period, we find the increments for the past three quinquennia have been respectively 13.8, 14.46 and 8.26 *per cent.*; and if we take district asylums alone the percentage increases for similar periods have been 18.76, 21.18 and 13.73 respectively. So that while there was a rise in the rate of increase during the period 1894-1903, there has been a very large reduction in the last quinquennium ending 1908. According to the Inspector's reports for the past five years, the average increase for the ten years immediately preceding each year reported on shows, as might be expected, a corresponding reduction, the increments being 534, 500, 500, 459 and 413, so that although the increase in 1908 was somewhat higher than that of the two years preceding, when the average is taken for a series of years the rate of increase continues steadily reducing. This is a significant fact, and one which certainly gives ground for hoping that the rate will continue to decrease in future years until the volume of insanity eventually becomes stationary, or, possibly, may even begin to show signs of decreasing.

It is rather disappointing to find that admissions to district asylums, both total and first admissions, show a decided increase, since for the preceding five years from 1902 to 1907 they showed a progressive decrease. (The total admissions showed a slight increase in 1907.) The inspectors are inclined to attribute the increase last year to the large number of patients admitted from workhouses—over 100 more than in either of the two previous years—and probably their surmise is correct. It must not be forgotten, however, that a considerable proportion of patients sent to asylums from workhouses are not, properly speaking, "workhouse patients," *i.e.*, uncertified pauper insane who have lived most of their lives in workhouses, but are many of them acute cases sent into the workhouse by their friends as a convenient half-way house, from which they can be transferred to the asylum without any further trouble or expense to their relatives.

The rate of increase of the ratio of admissions to population is decreasing, the proportion per 100,000 population of total admissions for each of the last four quinquennia being 66.0, 72.6, 83.2 and 84.6 respectively, and of first admissions 51.2, 55.6, 66.2 and 67.0, these figures showing that in the case of total admissions there has been an increase of 1.4, and in first admissions of but 0.8 per 100,000 in the last of these periods as compared with the previous one, the increase in the preceding quinquennia having been over 10 in each case. This is quite a remarkable drop in the rate of increase. In the years 1902, 1903 and 1904 the ratio reached its high-water mark. It is to be noted that the increase in admissions in 1908 was confined to ten asylums, there having been a decrease in ten, while in three the number remained stationary.

The recovery-rate was 36.9 *per cent.* on admissions, or 1.7 below that of the previous year. The rate shows a tendency to decline during the past ten years, as is shown in Table VIII, which is probably due to a larger number of incurable and senile cases having been admitted during later years, especially from workhouses.

The death-rate, 7.1, is practically stationary, but was lower last year

than for any year since 1896. The highest mortality, 11·2, was in Killarney, and the lowest in Waterford, 4·1, where it was also lowest in the preceding year; 26·3 of the total deaths were due to phthisis. A new and useful column, for which our acknowledgments are due to the Inspectors, has been added to the supplementary table on page 17, giving the mortality from the disease in each of the District Asylums, which is full of significance. It varies from 3·1 *per cent.* in Carlow to 50 *per cent.* in Clonmel. This fact is difficult of explanation on the usual theory. The Inspectors allude to the "close connection between tubercle and insanity"; and eminent authorities have frequently laid stress on this connection. But is it proved? Has insanity *per se* any intimate or necessary relation to consumption? It is extremely doubtful if this is the case. No doubt the number of asylum insane who die of consumption in proportion to asylum population is very largely in excess of the ratio in the case of the general population. But the general death-rate, including deaths from all causes, is very much higher in asylums than in the sane population. Not phthisis alone, but pneumonia, heart disease, epilepsy, apoplexy and paralysis, dysentery and diarrhoea, all these diseases occur in a much higher proportion (from four to eight times as much) in asylum patients than in the outside population. Moreover, as the number of patients under fifteen years of age in asylums is a negligible quantity, while the age-period 15 to 35 is what may be termed *par excellence* the phthisical period of life, in order to make a just comparison as regards the incidence of consumption amongst the sane and insane respectively it is this period which should be specially, if not exclusively, considered. According to the Registrar-General's figures the relative mortality from phthisis among the population at large during the period 15 to 35 is over 50 *per cent.*—in other words, during that period of life more than half the deaths in Ireland are due to phthisis. But that is the *maximum* rate amongst the asylum population, and has only occurred in one asylum, the average rate in all asylums being, as stated, 26·3 *per cent.* So that as far as *relative* mortality is concerned the insane have a more favourable record than the sane. That is one notable circumstance.

Another fact difficult of explanation on the usually accepted theory is the almost astounding difference in the phthisical mortality in the various asylums. Why are only 3 *per cent.* of the deaths in Carlow asylum due to consumption and 50 *per cent.* in Clonmel, 9 *per cent.* in Armagh, and 41 *per cent.* in Killarney? Surely only one inference can be drawn from these figures, *viz.*, that insanity, *quoad* insanity, has but little to say to the prevalence of phthisis amongst the insane, but that this is probably due mainly to two causes: First, the relative liability to the disease amongst the general population, for this varies a good deal in different districts; and secondly, the conditions which prevail in any individual asylum as regards site, soil, ventilation, heating, sanitary arrangements, overcrowding, etc. This conclusion is borne out by writers who have given special attention to this question. It is only necessary to quote here Dr. Chapman's conclusions in his supplementary report on the statistics presented by the Committee of the Medico-Psychological Association on Tuberculosis in 1902. He classifies asylums into two divisions, a "better" and a "worse," according as the



tubercular death-rate does or does not exceed 2 *per cent.* of the population, and expresses the opinion that "the tubercle can hardly be due to any essential difference in the two groups of asylums, and cannot have any special connection with insanity, but is causally associated with the individual asylums." And what he regards as the most important deductions from the statistics are thus stated :

"(1) That infection is one of the strongest causative elements in the prevalence of tuberculosis in asylums.

"(2) That a healthy (dry and well-drained) site is of extreme importance.

"(3) The causes of tuberculosis in asylums inhere in the asylums themselves, and not in the character of the patients sent to them."

Notwithstanding the fact that so distinguished an authority as Dr. Mott has (at all events as regards the London County Asylum) arrived at conclusions diametrically opposed to those of Dr. Chapman, as far as Ireland is concerned the facts certainly go far to support Dr. Chapman's views, and we are at least justified in the opinion that any causal connection between tuberculosis and insanity is as yet *non proven*. The solution of this problem is of vital importance ; the one theory tends to provoke a more or less *laissez faire*, or even a fatalistic attitude, the other furnishes a powerful incentive to set our houses in order, to remove every possible source of tubercular disease, every condition likely to favour its spread, and to see that our insane patients have the benefit equally with the sane of such remedial measures as modern medical science has proved to be the most effective in combating the great "white plague."

There has been no reduction in the phthisis mortality during the past twenty years, the average percentage mortality for the three last quinquennia and the four-year period preceding, as calculated from the table on p. 18 of the Inspectors' Report, being 26·88, 29·28, 26·69 and 27·09 respectively. Additional columns in this table giving the percentage mortality of phthisis and general paralysis would be useful and informing. The percentage death-rates from general paralysis during the same respective periods were 2·46, 3·56, 3·65 and 3·92, so that there has been some increase in the relative mortality from this disease. The ratio in English asylums for the year 1908 was 16·8 *per cent.* of the total mortality, or more than four times as great as in the Irish asylums.

The Inspectors urge the desirability of a much larger extension of asylum farms as one of the most important elements in the treatment of the insane. This is especially obvious in the case of Ireland, where the large majority of asylum patients belong to the agricultural class. The inspectors say : "Not only do large farms attached to asylums afford means of healthy labour in the open air and an outlet for that restlessness and desire of motion so common amongst the insane, thus producing quietude and peace where formerly there was noise and excitement, but the interest aroused in agricultural work also brings back the wandering mind to sane views, and so helps to promote recovery." With these views, it is needless to say, we are in hearty accord. It is mentioned that the Scottish Lunacy Commissioners have suggested, as a reasonable allowance of land, an acre of arable land for



each male patient. In Ireland there are close on 11,000 male patients in asylums with an acreage attached of 3,776 acres, so that we are still far from having reached the Scottish ideal.

Might we suggest that a table giving the occupation of patients in asylums would be a useful addition to those already furnished. In the statistical tables of individual asylums such a return has always been given, and a summary of these, giving the aggregate numbers for the entire country, as in the English Blue Book, would be of distinct advantage.

The disposition inherent in many Irish public bodies to set themselves "agin' the Government" has been exemplified in the case of Carlow asylum, when, on the promotion of the former Superintendent, Dr. Jas. Fitzgerald, to Cork Asylum, the Committee proceeded to elect the assistant medical officer to succeed him, who, however well qualified he may have otherwise been, had not completed the five years' asylum service required by law in any candidate for that position. This action on their part being declared illegal they endeavoured to postpone the election until such time as the necessary condition should be fulfilled, and succeeded in effecting a very protracted delay in making the appointment. Eventually proceedings were instituted to compel the Committee to carry out the duty of appointing such an officer, and the Court of King's Bench issued a mandamus to that effect, a proceeding which was confirmed on appeal, with the result that Dr. Thomas Greene was appointed, who had served with credit as Assistant Medical Officer of Ennis Asylum.

In the Inspectors' remarks on asylum attendants we heartily concur. Last year we had occasion to comment on the very stationary recovery-rate in asylums. Next in importance to assiduous medical care and supervision in the treatment of the insane comes the character of the nursing staff. Without the co-operation of intelligent, humane and fairly well-educated attendants little or no advance in the curative treatment of insanity can be effected. There is no doubt whatever that the nursing staffs of asylums at the present day are far superior to what they were twenty-five or thirty years ago, an improvement due in no small measure to the persistent efforts of our own Association to raise their status and qualifications. But we must not be content to stand still, and continuous and strenuous endeavour will still be required to raise the standard of nursing in asylums. And this can be achieved mainly in two ways, by inducing, where possible, asylum committees to act liberally as regards pay and privileges so as to attract a higher class of candidates to the service, and secondly, by the special teaching by the medical staff of everything that an attendant should know, which will have the effect not only of providing them with a certain amount of useful expert knowledge, but which is also calculated to vastly enhance their interest in their work and their conception of their calling, and so raise it from what it is to be feared it too frequently has been, a condition of wearisome monotonous drudgery, to that of an interesting and honourable vocation.

The other matters touched on in the Inspectors' Report are more or less of a routine nature, and do not call for any special comment.

*Drugs and the Drug Habit.* By HARRINGTON SAINSBURY, M.D., F.R.C.P. London: Methuen and Co. 8vo., pp. 307. Price 7s. 6d.

This book is a welcome addition to medical literature, for it is written in a style that is attained by few of the recent works on medical matters. It is not a mere compilation of facts and ideas relating to the subject, but a careful, thoughtful, and philosophically reasoned exposition, of large information, well digested. It is written in excellent English, with admirable clearness of expression and logical sequence of statement. The literary embellishment gives evidence of wide reading illuminated by a broad grasp of cognate scientific subjects.

The book commences with an admirable historical sketch, followed by chapters on definitions, the objective of drugs, the rational and psychic basis of drug treatment, etc., ending with chapters on habit control, uncontrolled habit, preventive and curative treatment. The historical sketch is particularly excellent, and many of the chapters are admirable both for the matter and the clearness of exposition.

The author has, moreover, kept rigidly—in some respects too rigidly—to his thesis, and this might induce some critics to consider him too much wedded to his subject in the practical treatment of disease.

Dr. Sainsbury's concept of disease, however, sometimes appears to be too much that of an entity; it is certain that he does not really regard it as such, but in his illustrations he nearly approaches this attitude, and fails to emphasise the fact that the manifestations of disease are merely physiological processes in excess or defect.

The equation of disease as  $= A + B + C + D + x$  does not take into consideration the altered values of  $A, B$ , etc., with which  $x$ , although the cause, has nothing to do; similarly the drug  $y$  is credited with merely countervailing  $x$ , without relation to its effects in restoring or (as is too often the case) still further disturbing the relations of the physiological processes  $A, B$ , etc.

This leads naturally to a far too great trust in the treatment of symptoms.

Dr. Sainsbury, indeed, sees so much of the good and alludes so little to the disadvantage of drugs that it suggests the old quotation, "*de mortuis*."

One excursion is made beyond the drug area in the chapter on "ideation" which is very able, and, on the whole, satisfactory.

Knowing how difficult it is to get patients to relinquish the bad habits which have produced their disorder or to adopt hygienic procedures, and how they will swallow a remedy and persist in their evil habits, is it not much more important and right to attach the mental assurance, which a physician should always give, to the former rather than to the latter, and to explain the real value of prescription futilities? If the patient is so ignorant that a drug fetish is really needed, is it not better to apply it, "more Africano," to the outside of the abdominal wall, rather than in our "civilised" fashion to inflict it on the long-suffering mucous membrane of the intestinal tract? Should we not always insist, even when the drug is not a mere futility, on the necessity for abandonment

of bad habits, rather than encourage trust in the drug, which only temporarily countervails their evil effects?

The author, in his closing paragraph, insists that drugs are natural forces, and implies that therefore they must be good. Everything in Nature may be so regarded, but it becomes a "drug" only when it affects the physiological processes in a manner that is not merely nutritional, and the question is, not whether they come direct from Nature or are prepared by art, but whether their physiological effect is for good or ill?

The concluding chapters on habit show that, in spite of long sufferance, probably every drug has an ill effect. Drug-treatment resolves itself, therefore, into the question of how much evil may be done that good may ensue.

We commend the book to our readers as both interesting and valuable, and as a brilliant addition to medical literature.

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*The Relation of Medicine to Philosophy.* By R. O. MOON, M.A., M.D.Oxon. 8vo., pp. 221. London: Longmans & Co., 1909. Price 4s. 6d.

Three chapters of this book have already appeared in the *British Medical Journal*, and the author, although he does not profess to have produced a history of medicine such as that of Haesen, Withrington or Kurl Springel, may be congratulated on having produced a very finished sketch from his chosen point of view.

The first three chapters are devoted to the relation to Greek philosophy. Then follow chapters on the influence of early Christianity, of Arab philosophy, on the various influences of the middle ages, of the renaissance, and of Paracelsus, concluding with studies of the effect of philosophy on medicine in the seventeenth and eighteenth centuries, and of the thought of the present time.

Without any attempt at criticism in detail, the opinion may be expressed that the task of Dr. Moon has been most ably executed, as well in its literary finish as in the comprehensive grasp of the subjects treated. In his final paragraph he says that "now it will be rather the custom for philosophy to come to medicine, and taking from her all the truths which through the ages she has been slowly recovering from ignorance and chaos, gather them up into one vast generalised truth which will enable men to lead the lives of intellectual and moral beings." This is the keynote of the spirit in which the book is written.

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*Die Gehirnoberfläche von Paralytischen* [*The Brain Surface in General Paralysis*]. By PROFESSOR NÄCKE. Leipzig: Vogel, 1909. Pp. 58, large 4to.

Professor Näcke here brings, with his usual laborious care, a contribution to his study of the morphology of general paralytics from a new side. The work is mainly an atlas of forty engraved plates (after drawings) of the brain surfaces of forty-nine general paralytics, mostly represented in natural size. The author furnishes an introduction and

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explanations, but he puts forward his work not so much as an argument as a collection of documents which will be of value to all workers, whatever their own personal views may be.

This value of the atlas is well set forth by Professor Flechsig in the preface he has written to it. He points out the importance of the problem as to what determines the incidence of general paralysis in only striking a minute proportion of the syphilitic, and he regards Näcke's work as of permanent interest to all who are engaged in this field, whatever their own standpoint may be in regard to the question of the significance of the external form of the cerebral hemispheres. The limits within which the brain may vary without ceasing to be normal are still uncertain, and Flechsig believes that Näcke's atlas will furnish the stimulus to a new scientific movement.

HAVELOCK ELLIS.

*Traité Internationale de Psychologie Pathologique. Tome Prem.: Psychopathologie Generale.* Felix Alcan, Paris, 1910. Large 8vo. Pp. 1028. Gravures 353. Pr. 25 fcs.

This work is the first of three volumes to be published under the direction of Dr. A. Marie, aided by Bechterew, Clouston, Grasset, Lugaro, Magnan, Pilcz, Raymond, and Ziehen, whose names alone are a sufficient guarantee that the divisions of the work will be adequately dealt with by the long list of almost equally distinguished contributors.

The second volume will be devoted to "Mentalité morbide (clinique et psychologique)," and the third, final, volume will be devoted to "Principes Généraux d'Assistance et Thérapeutique."

The volume under consideration, of the contents of which this notice is intended only to give a sketch, without any attempt at detailed criticism, commences with a chapter by Dr. F. Grasset on the relations of psychiatry and neurology, in which the unity of human neurobiology is insisted on. This is followed by a chapter on the history of mental medicine by Dr. F. Del Grico. To this succeeds a very valuable contribution by Dr. A. Marie on psychiatric anthropology, which is copiously and interestingly illustrated. The fissures and convolutions of the brains of the insane are dealt with by Dr. Mingazzini, and the chemistry of the cerebral substance is treated by Dr. A. Marie. Next follows a very copious and systematic chapter by MM. A. Marie and Dide treating of the "Examen physiopathologique par fonctions." To this succeed contributions by Klippel, Lugaro, Marinesco, Dide, Medea, and L. Levastine on general pathologic anatomy in mental medicine.

Human psychologic evolution at puberty is dealt with by Professor Marro, and the volume concludes with essays on methods of examination, Dr. Clouston dealing with the clinical, Professor Bechterew with the "psychologique objectif," Ferrari with the "medico-pédagogique," and Professor Ferrari with the medico-legal.

This enumeration of the contents will be sufficient to indicate the great value of the work as a contribution to medico-psychologic literature. The writers have in all cases maintained the reputation that most of them have already gained in relation to their special subjects.



The work is open to the general criticism, which appertains to all such undertakings, that some subjects are treated in too little detail, whilst others—but this is much less frequently the case—are given a relatively larger consideration.

The literary side of the work is of high character, and the numerous illustrations are for the most part admirably produced. The typesetter has made a curious mistake in an English quotation on the female voice, p. 840, but this exception only emphasises the general correctness of the letterpress.

The work is of such importance that every alienist physician should study it and every psychologic library possess it for reference.

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### Part III.—Epitome of Current Literature.

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#### 1. Neurology.

*A Proof of the Existence of Neuro-fibrils in the Living* [*Una prova dell'esistenza della neuro-fibrille nel vivente*]. (*Riv. di Pat. Nerv. e Ment.*, fasc. iv, April, 1909.) *Lugaro, E.*

Neuro-fibrils have often been suspected of being artificial productions due to the action of precipitation, by histological reagents, of cellular colloids. This suspicion has been strengthened by the fact that, outside of the body, appearances similar to the neuro-fibrils may be obtained by precipitation of organic and inorganic colloids. Lugaro is of opinion that, in view of these suspicions, it ought primarily to be demonstrated that neuro-fibrils exist in the living, and proof afforded that they are not artificial products of our manipulation or of *post-mortem* coagulation.

Pighini, in a recent work, pointed out that he has subjected extracts of nervous substance to the several treatments which pieces of nervous tissue receive in the fibrillary methods of Cajal and Donaggio. He holds that he has attained from these methods networks which were a specific product of the technical process adopted, inasmuch as they were not obtained by other methods, *e.g.*, by the action of alcohol, formol, or perchloride of mercury. Lugaro draws different conclusions from the data of Pighini, and holds that experiments of the kind are not able to solve the question. It would be too much to say that in living organism structures do not exist solely because it is possible to manufacture them artificially by precipitation.

With the object of proving that neuro-fibrils exist in the living and in order to eliminate every doubt, Lugaro has made the following experiments in three young rabbits and two young cats, and without using narcosis. The lumbo-sacral medulla was exposed and deprived of its dura mater. On the medulla *in situ* and still living was poured slowly a litre of boiling physiological solution (chloride of sodium) at a temperature that varied in the different experiments between 80° and 100° C. The coagulation of the spinal cord in this way was extremely rapid, the surrounding tissues being also coagulated to a depth of 7–8 mm.



In all the animals, including one in which the spinal cord was boiled for five minutes, the preparation after the use of fluoride of silver showed very fine reticulated neuro-fibrils in the elements of the cord, as it did also in the pieces taken from animals which had been killed.

The positive finding thus obtained appears to Lugaro to demonstrate in an indisputable manner that neuro-fibrils exist in the living, that they are a true organic part of the cell, and that, therefore, it is permissible to formulate hypotheses about their function.

Lugaro purposes describing more particularly and later the results of a methodical and complete study of the researches which he has undertaken to prove his thesis.

HAMILTON C. MARR.

*Complete Survey of the Cell Lamination of the Cerebral Cortex of the Lemur.* (*Proc. Royal Soc., B, vol. lxxx, 1908.*) Mott, F. W., and Kelley, A. M.

In this communication, the authors give notes on the material and method used in their investigations, and then a short account of the lemur and the correlation of its mode of life and habits with the cortical development of the brain. This is followed by a general description of the brain and a histological description of the cortex.

The brains of four lemurs were used, *lemur brunneus*, *lemur mongoz*, and two specimens of *lemur catta*. They limited themselves to mapping out the main types of the neopallium, namely, the motor, frontal, temporal, post-central and visual types, to pointing out variations in these types, and to giving some description in the text of the intermediate areas. Essentially there is little difference between their results and those of Professor Brodmann (who made his researches with the brain of *lemur macaco*), except that he has defined more subdivisions of the cortical types, and in their diagram they have given a broader band for the motor area, carrying it further back, especially in the lower part; and they have not carried the visual area so far forward on the dorsal surface.

A. W. WILCOX.

## 2. Physiological Psychology.

*The Psychology of Puberty* [*La Psychologie de la Puberté*]. Marro, A.

This paper of Dr. Marro was a communication to the International Congress of Psychology held at Amsterdam in 1907. The first part deals with the normal psychology of puberty, and the second part with the morbid psychology. The evolution of puberty is accompanied by remarkable physical and biological modifications, which act on the sentiments, thoughts, and actions of young people of both sexes. First, there is an increase of sensations, which increase the excitability of the individual and make him sensitive to the attractions of sensuality and consequently inclined to amorous emotion. Secondly, there is a greater energy of reaction, which affects the excito-motor centres as well as the representative centres multiplying associations, which unite and give to the individual means to assure the function of reproduction. The hyper-excitability manifests itself with analogous effects, though not with equal intensity, in both sexes.

In young men, the onset of puberty is marked by a stubbornness which makes them find insupportable all obstacles put to their liberty. Courage, boldness in their desires and thoughts, and, consequently, in their actions, are essentially marked. The feeling of personality makes itself felt clearly and with force ; they love to affirm it, even in opposition. The spirit of rebellion in the family and towards teaching authorities is born, and reproofs are badly taken. The mirage of military life attracts by reason of the vanity of the uniform, the novelty of the occupation, and the tendency to fighting.

They begin to have a liking for wine, they give themselves airs, they learn to smoke, overcoming the distaste which tobacco at first excites. The community of tendencies unites the individual to his companions, and the bonds of friendship strengthen with those whose sentiments harmonise with his own.

The young man submits very easily to the suggestion of example and to words which strike his imagination and urge his action. Although he may be truly egoistic, the conscience of a new force and the flattery of self-respect makes him inclined to generosity, and the want of reflection associated with this makes him often a spendthrift. He has aspirations towards a new life, and his love for consideration makes him attempt a thousand projects ; meantime he flees from the difficulties of real life and passes easily from a too great confidence to a discouragement which is not justified. From this source come very frequently many hypochondriacal occupations and the mysticism in which the young man buries himself. The "unforeseen" characterises the mental state at this epoch. The individual is conscious of impulses that he has not yet acquired the capacity to rule or regulate by reflection and judgment. As a result numerous unconsidered actions contrast with the habits and former character, and from which it would be imprudent to deduce his real nature and destined future. At first there is an abyss between the aspirations of a boy and reality, between such forces as he imagines and those which are real, between that which he proposes to do and that which he accomplishes. Many disillusionings attend his desires, but, step by step, under the sting of desire, under the stimulus of self-respect, with the lessons which experience every day teaches him, he develops more and more and approaches nearer to the end which he desires.

In the girl, the evolution of puberty presents notable differences. Thus, while the young man reveals his tendencies to action with a view to showing what he can do, the young woman, by the exhibition of her qualities, seeks to be seen as she is. The increase of activity which corresponds in the boy to the arrival of puberty is expressed in the girl by a suppression of bodily activity, although the condition is revealed by mental manifestations.

The difference in the nature of girls compared with that of boys is noticed when the punishments of boys and girls are compared. With boys punishments are for active faults, altercations, assaults, thefts, or attempts at theft, etc. ; in girls punishments are for idleness, negligence, or slovenliness. They excel boys only in one category of the active faults—sins of the tongue.

This passive condition of girls is only apparent, and resembles the

immobility of the magnet which attracts the iron approaching it. That is to say, puberty transfers the girl into a power which excites the attention of the male, and causes him to use the excess of physical power which the development of puberty has given him in order to overcome the obstacles which stand between him and the object he wishes to attain.

Two mental conditions are noticeable in the girl: first, amiability; when this is exaggerated it is called "coquetry," and by it the girl attempts to make herself more pleasant in the eyes of men and her companions. The second condition arising in the girl is modesty or reserve, which is represented morally as bashfulness, physically as virginity. Although apparently contrary to the first quality, the second is only the complement of it, because the price of the conquest increases in proportion to the obstacles opposing it. These two propensities which the evolution of puberty develops in the girl explain to us all the peculiarities of her mental state, of her effective life, and her conduct compared with that of boys. All that demands continuous effort is less developed in the girl. Thus the attention is less durable, the judgment is less fully developed, the faculty of synthesis is less fully complete. On the other hand, curiosity is more lively, the power to analyse is greater, states of mind depending on the emotion are very frequent, and in her voluntary determinations the elaboration of reasoning is more easily troubled by impulses of feeling.

Religiosity, confidence in the Divinity, and fervent invocations are naturally developed in the girl because of the lack of trust she has in her own forces, and the need she feels of being under a protective power. Love of order, love of preservation, of the cares of the house and of children are some of the details in which the progress of youth distinguish the girl from the boy, who is more affected by outside occupations.

As the young girl arrives at the period of maturity, she acquires little by little a higher conception of her personality, and learns to value herself more and more. Her conduct tends always to become more regular. Feeling henceforth that in order to reach the place in society occupied by other women nothing remains for her but marriage, she co-ordinates all her desires to this end and prepares herself by putting in play all her alluring attractions.

In discussing the second part of his subject, *viz.*, the morbid psychology of puberty, Dr. Marro states there are conditions in which the development of puberty is arrested in all its manifestations in those which directly concern the sexual instinct as well as in the mental manifestations associated with it. In addition to vice, which may be the result of arrested development, other disturbances may appear starting true maladies, which proves the weakness of the organism when it is put to the proof.

Manifestations of abnormality originate generally very early in puberty. Sometimes the individuals remain idle, dull, taciturn, solitary, indifferent to amorous feeling, or subject to a frenzied violence quite disproportionate to any provocation which they may receive. At other times they are very restless and turbulent, always in movement without fixed aim, incapable of attention or reflection, dominated by

sudden impulses which they do not know how to resist, by caprices which succeed each other without rule or limit, precocious in wickedness, gourmands, vain, inconstant and suspicious. The infractions of family discipline open the way to outrages against social law, and this epoch may be considered as the beginning of the criminality of man, at first with outrages against property and then against personality. Love of wandering, alcoholic drinks, games of hazard, and distaste for regular occupations are seen much more than formerly. This explains the number of trades attempted by these individuals, who hate regular work and change their occupations in the vain hope that the new occupation will be less tiring and less fatiguing than the old.

The mental troubles of this age are distinguished by their superficiality and quick cure. They are generally troubles due to moral shocks which affect young people early in the crises of puberty. The second order of mental alterations, which are the true psychoses of puberty, may also appear. They may be regarded as a kind of failure in the development of the organism. Sometimes sexual abuse gives it an impulse. Alterations of vegetative function precede and then follow mental alterations, which form the true psychosis of puberty.

HAMILTON C. MARR.

*Suggestibility in the Normal State* [*Contribution à l'Etude de la Suggestibilité à l'Etat de Veille*]. (*Arch. de Psychol.*, April, 1909.)  
Jung, E.

Professor Jung, the Geneva zoologist, has for many years past occupied himself with experiments on the suggestibility of the normal healthy human subject under the ordinary conditions of life. His attention was first directed to the subject by finding that a student in his laboratory, who had been accidentally furnished with a microscopic slide which the cover-glass had come away from and left quite clear, produced in good faith a peculiar drawing of a diatom which ought to have been but was not there. Since then Jung has kept a certain number of clear slides wherewith to test students from time to time. During fifteen years eighty students have been subjected to this experiment. Of these, sixty-three (86.3 *per cent.*) obstinately resisted all suggestions and saw nothing; six saw nothing at first, but afterwards saw something vaguely; eleven furnished drawings of organisms which had been described to them but which they had never seen. They were aged from eighteen to twenty, seven of them men and four women. This shows in relation to the number of each sex submitted to the experiment a relatively greater suggestibility of men. Jung does not believe, however, that men generally are more suggestible than women, but rather the reverse, and supports this belief by the results of somewhat similar experiments he has made in schools. Jung has never been able to obtain any but negative results from more advanced students, over the age of twenty-one.

In another series of experiments adults proved much less resistant—the experiment of the “magnetised card.” This experiment Jung learnt from Professor Frédéricq, of Liège, and admits that he had himself been a dupe to it. The experiment is based on a trick of a familiar character. Eight cards are arranged on a table in a diagra-



matic form corresponding to the features of the face ; the operator then states that, though personally sceptical in occult matters, there are mysterious forces in Nature, and that if a bystander will touch one of the cards he (the operator) will be able to detect that card by the sensation it imparts to him. He leaves the room, a card is touched, and on returning, after carefully and tentatively feeling all the cards he fixes on the right one, which has of course been indicated to him as he entered the room by an accomplice touching the corresponding part of his own face. Then an innocent by-stander is invited to test his own sensitiveness. In this way Jung has tested 420 persons, of whom only 68, or 16·2 *per cent.*, entirely resisted the suggestion, while 352, or 83·8 *per cent.* experienced sensations in the absence of any objective stimulation. Among these are not included any who, at first thinking they felt something, realised that they were mistaken. It was found that men resisted the suggestion much better than women (42 *per cent.* as against 8 *per cent.*), that suggestibility diminishes with age, all subjects below twenty proving suggestible, and that men acquire resistance with advance of age to a greater extent than women ; the exceptional case is, however, mentioned of a distinguished professor of physics who experienced a sensation up his arm like a shock from a Leyden jar. The results obtained frequently far exceeded the sensations suggested : one lady, a skilful pianist, was unable to play for a day or two, her fingers having become stiffened ; another suffered for days from muscular tremors. Jung is convinced that by this method alone, without any hypnosis, it is possible to obtain lasting paralyses, anæsthesias and hyperæsthesias in healthy persons. By variations of the "magnetised" card method Jung produced thermal, olfactory, visual, and auditory hallucinations ; all these, however, were less easy to obtain than the muscular sensations. Such experiments have obviously a high value in enabling us to estimate the weight to be attached to evidence, apart from the illustrations they furnish of the normal basis of many morbid phenomena.

HAVELOCK ELLIS.

*Pseudo-infantile Characters* [*I Caratteri Pseudo-infantili*]. (*Soc. Ital. per il Progresso delle Scienze*, Oct., 1908.) *Giuffrida-Ruggeri*.

The author, who has long been interested in the morphological significance of infantile characteristics, in relation more especially to the masculine and feminine types, here returns to the question. He is chiefly moved to do so by the views of Hagen, who maintains that the infantile type is the primitive human type, and that the lowest races are those that are nearest to the infantile type. Prof. Giuffrida-Ruggeri does not completely dissociate himself from this point of view, and with Hagen he assumes that the infantile type is morphologically inferior, but he considers that this view can only be accepted with considerable reservation. We must recognise, he holds, the existence of *pseudo-infantile characters*, which it would be "a pure illusion without any scientific basis" to regard as really indicative of infantile affinities. He makes this distinction very largely in the interests of women, whose morphological resemblances to children might otherwise seem to involve inferiority. "Each sex is perfectly adult in all its characters."



It may be observed that while this conclusion is entirely sound, the conception of pseudo-infantile characters would scarcely have been necessary for its purpose if the author had not started with the assumption that infantile characters imply inferiority. This assumption is so rooted in his mind that he attributes to the present reviewer, without any warrant, the statement that women are "immature" because they present certain infantile characters. As a matter of fact, morphologically, infantile characters are more often superior than inferior. The European adult is nearer to the child than the Australian or even the negro adult, and it may be plausibly maintained that in the course of civilisation we are moving towards, rather than away from, the type of the child.

HAVELOCK ELLIS.

*The Psychology of Adolescence* [*Psychologie de l'Adolescent*]. (*Arch. de Psych.*, April, 1909.) Lemaitre, A.

Professor Lemaitre has long occupied himself, from the pedagogical side, with the psychology of youth, and he here brings together a number of cases—which, without being common, he regards as not rare—illustrating certain morbid aspects of adolescence. Eight of these cases, mostly occurring in boys between twelve and sixteen, illustrate what the author proposes to term *parapsychism*. He regards it as the second phase in a morbid evolution (often really psychasthenia) of which the first stage is a latent physical condition and the third stage a conscious physical or psychic malady. This second stage is a more or less conscious psychic crisis, and even so far as it is conscious the subject usually seeks to conceal it from everyone. These boys are for the most part dreamy, imaginative, a little eccentric, and are candidates for tuberculosis or neurasthenia. In one case, the parapsychic stage appeared at the age of fourteen with nyctophobia and agoraphobia, and eventually resulted in a sudden breakdown which involved complete cessation of studies; in another case, the parapsychic stage appeared, in an amiable and intelligent boy, in an irresistible but innocent homosexual attraction to young men; in the third stage tuberculosis appeared and death at nineteen. In an exceptional case—a boy whose health had never been completely re-established after pneumonia—the parapsychic stage was brief and sudden, consisting of a very vivid dream of the subject's own tombstone; in the afternoon he was unable to go to college, and was shortly after ordered complete cessation from work and rest by the sea. In the case of a boy of fourteen, of high intelligence, various minor disturbances began to appear, accompanied by increasing defects in handwriting; they culminated in severe anæmia involving temporary cessation of study. In yet another case, with alcoholic heredity, there were hallucinations, with religious and erotic hyperæsthesia, followed by remorse; in this case treatment by suggestion proved beneficial. A case is also presented of rudimentary doubling of consciousness associated with auditory hallucinations, and the author points out (what is undoubtedly true) that doubling of consciousness in highly sensitive, nervously exhausted, or hysterical individuals is often an effort of Nature to attain self-protection and self-reparation by discharging and isolating injurious groups of images capable of forming

an independent whole. Finally the case is given in full detail of a young *dégénéré supérieur*, of English origin, who possessed considerable intellectual aptitude associated with a variety of morbid tendencies.

HAVELOCK ELLIS.

### 3. Ætiology.

*The Rôle of Syphilis in the Ætiology of Dementia Præcox* [*Rôle de la Syphilis dans l'étiologie de la Démence Précoce*]. (*Gaz. des Hôp.*, June, 1909.) Roubinovitch, J., and Levaditi.

The examination of the cerebro-spinal fluid by the Wassermann method has enabled the rôle of syphilis in the ætiology of certain mental disorders to be more precisely defined. By these means the theory of the syphilitic origin of tabes and general paralysis has been confirmed. The researches of Plaut have also demonstrated that certain forms of juvenile dementia are due to hereditarily transmitted syphilis. The present research was undertaken to determine if syphilis might not be an occasional factor in the genesis of dementia præcox. Fifteen cases were examined by the Wassermann method. In only three of them was a positive reaction obtained (fixation of the complement). No definite history of syphilis, either hereditary or acquired, was furnished in these three cases. Nevertheless such infection was possible.

From these results the writers draw the conclusion that the cerebral changes which characterise dementia præcox are not attributable to syphilitic infection. In the majority of the cases (twelve) the negative reaction definitely excluded the possibility of specific infection. It may rarely happen that infection has occurred. It is then purely accidental and has no causal significance in the production of the malady.

H. DEVINE.

*The Causes of Transient Cerebral Paralysis.* (*Bristol Med. Journ.*, March, 1909.) Parker, G.

The histories of five cases of transient cerebral paralysis are given in this paper, one occurring in uræmia, two probably due to arteriosclerosis, one arising in a healthy man under great mental excitement with possible sclerosis, and another in gouty glycosuria.

They all, even the uræmic and gouty ones, seemed to be due to some form or other of local and temporary cerebral anæmia, and the author is of opinion that a great number of transient paralyses in various diseases are so caused.

This acute localised brain anæmia is produced either by vascular degenerations or by compression from active œdema, and accounts for their transitory character.

A. W. WILCOX.

### 4. Clinical Neurology and Psychiatry.

*Contribution to the Literature on Korsakoff's Polyneuritic Psychosis* [*Zur Lehre von der Korsakoff'schen polyneuritischen Psychose*]. (*Neur. Cbl.*, 1909, Nr. 7.) Choroschko, W.

This article deals with localised symptoms in the cerebrum in a case of Korsakoff's disease. Knapp and Kutner have already described dis-

turbances of a hyperkinetic character—epileptiform and Jacksonian seizures and choreiform movements—with polyneuritic symptoms. Similar disturbances in connection with Korsakoff's disease are naturally very interesting.

The case cited is that of a woman, æt. 40, a Russian landowner. Nothing is noteworthy in her history except her strong addiction to alcohol. The mental malady followed a severe attack of gastro-enteritis. The primary symptoms were a nodding spasm and an affection of the eyes which seemed to be optic neuritis. Later on there was failure of memory and weakness of the extremities. Korsakoff's symptom-complex was established. There were fairly well accentuated polyneuritic symptoms and a hyperkinetic disturbance which showed itself in clonic contractions of the muscles of the neck, and latterly a motor disturbance in the fingers.

The fact that the contractions of the neck-muscles appeared simultaneously with the neuro-psychic symptoms, and ceased with them, points to the motor affection being a symptom of Korsakoff's disease.

As regards the involuntary twitchings of the fingers, these have been noticed in the same way by Korsakoff in connection with polyneuritic psychoses, and by others in multiple neuritis without mental symptoms. They are variously described as athetose, athetoid, clonic or choreiform.

The head movements were diagnosed as tic, chiefly because the same muscles (those on each side of the neck) took part in them continuously, and gained strength in so doing. They are thought to be clinical signs of a local disturbance in the cerebrum. They remind the author of similar symptoms in general paralysis, and in the following table the symptoms of the two diseases are compared :

General paralysis.	Korsakoff's disease.
<i>Clinical picture :</i>	
Typical psychic disturbances; psychic signs peculiar to general paralysis.	Symptom-complex of Prof. Korsakoff; psychic symptoms of polyneuritis.
<i>Accompanying and local symptoms :</i>	
Epileptiform attacks; Jacksonian attacks, paralytic attacks.	Epileptiform attacks; Jacksonian attacks; apoplectiform and pseudo-apoplectiform attacks. (Knapp.)
<i>Symptoms of continued hyperkinesis :</i>	
Cortical spasm (W. A. Mura- toff); tic (Seglas).	Choreiform movements, clonic spasms in the fingers and neck. (Knapp and author.)
<i>Cause :</i>	
Syphilis.	Various.

In comparing the two diseases, it is found that the accompanying symptoms are similar, and it is evident that in both the exciting cause has affected the whole nervous system. When the causes of the diseases are looked at, however, there is a difference. General paralysis is ascribed to syphilis only, while polyneuritis has such a variety of

causes that enumeration is difficult: Alcohol, carbon bisulphide, arsenic, lead, quicksilver, tobacco, gastro-enteric and autoin poisonings; pneumonia, typhus, pyæmia (resulting from carbuncle), dysentery, leprosy, post-puerperal states, tuberculosis, influenza, beri-beri, etc.

In view of these facts no fixed conclusion can be reached at present as regards causation, but Dr. Choroschko makes the following surmises: (1) That all the enumerated agents in entering into the organism cause such conditions (toxic ?) by their influence on the metabolism as to bring about the polyneuritic psychosis. (2) That there is a certain nervous psychic constitution—a certain type of human being—that after being poisoned by the above-named virus is so disturbed in his normal functions that the phenomena of polyneuritic psychosis results. (3) That all the above-named agents by unrestricted working on the human organism can produce the peculiar psychosis.

In the two latter conclusions the idea of the polyneuritic psychosis being a nosological entity is dispelled, and the conception of a polyneuritic constitution or a psycho-polyneuritic symptom-complex arises.

HAMILTON C. MARR.

*Myxœdematous Condition of the Skin accompanying Manic-depressive Insanity* [*Ueber myxœdematose Hautveränderung als Parallelvorgang bei manisch-depressiver Psychose*]. (*Neur. Cbl.*, Nr. 4, 1909.)  
Tomaschny.

The case described is that of a female, who from the age of fourteen had been subject to recurrent attacks of insanity. The myxœdematous condition occurred in connection with an attack at the age of twenty-three.

The history of the patient shows that her father and mother were both insane. A brother and a sister of her father committed suicide, and a cousin of her mother was insane.

After admission to the asylum at the age of twenty-three, she had two maniacal and two depressed periods. During both attacks of depression she showed a peculiar physical condition. Soon after she began to be depressed, there appeared a cushion-like swelling in the skin and underlying tissue of the under half of the face, and particularly in the lips. This swelling increased until in a few weeks the face became quite disfigured, and assumed an appearance similar to that of patients suffering from myxœdema. The swelling was fairly firm, quite painless to the touch and left no mark on depression. The tongue was not affected. A thorough examination was made for other symptoms of myxœdema, but no further physical change was discovered. The temperature did not depart from the normal. She was given thyroid extract tablets for five days, but these affected her unfavourably.

In addition to the deformity of the face, there was noticed a large increase of tissue on the body, especially in the regions of the shoulders and hips. It was difficult to decide whether this was abnormal, or whether it was only a natural condition resulting from rest after a lengthened period of excitement. She gained in all about 22 lbs.

The myxœdematous condition continued during both attacks of depression (eight months and ten months), and when the excited state



commenced the swelling began to disappear and was not observed for ten weeks.

That there was a connection between the mental and physical signs cannot be doubted (in the history of a former attack a swelling of the lips is noted), but the cause of this connection remains to be discovered. Hoche found myxœdematous changes in a case of coal-gas poisoning, and McIlwaine has described two cases of myœdema following respectively influenza and loss of blood from anæmia. In the two latter cases, a toxic condition was ascribed to the blood. In the case here described, it is also very probable that the physical condition was due to a toxin similar to that found in certain diseases of the thyroid gland. As the bodily and mental conditions were in this case connected, the toxin must play a part, either as cause or effect, in the mental disturbances.

The case illustrates the attitude that has often been taken up with regard to manic-depressive insanity, *viz.*, that this insanity is closely related to disturbances of metabolism.

HAMILTON C. MARR.

*The Diagnostic Value of Porges' Reaction with Glycocholate of Sodium on the Serum of General Paralytics* [Sul valore diagnostico della reazione di Porges col glicocolato sodico sul siero dei malati di paralisi progressiva]. (*Riv. di Pat. nerv. e ment.*, vol. xiv, Fasc. ii.) Tommasi, C.

Dr. Tommasi has made a series of comparative researches between the reaction of Porges and that of Wassermann in cases of general paralysis, and gives his opinion of Porges' reaction in this paper.

At a meeting of the Berl. med. Gesellsch. in December, 1907, Porges affirmed that by mixing equal parts of blood-serum of a tabetic or a paralytic with lecithin in physiological solution a characteristic flocculent precipitate is obtained. The mixture, he asserted, remained clear if normal serum was treated, or the serum of diseases other than those noted.

Again at another meeting the same author referred to the result of some comparative researches in which he tried to prove that his reactions had in syphilis and general paralysis the same specific value as Wassermann's reaction. He found a positive reaction in 80 *per cent.* of cases of syphilis, 70 *per cent.* of cases of tabes, and 100 *per cent.* of cases of general paralysis, and negative in other maladies. At the same meeting Grosz and Kraus contributed their experience, which confirmed the finding of Porges.

As a result of these suggestions, analogous methods were proposed for the substitution of Wassermann's reaction. Porges proposed to substitute for lecithin, which he used in his primary researches, glycocholate of sodium. Lecithin in suspension was very unstable, and his reaction with lecithin had been demonstrated by Zalla as not specific.

Dr. Tommasi has made experiments in nineteen cases, ten of which were cases of general paralysis, one a healthy individual, one a case of idiocy, one of epilepsy, and six cases of senile dementia. He has reached the following conclusions regarding Porges' reaction:



(1) Porges' reaction with glycocholate of sodium is not constant in general paralysis.

(2) A positive reaction may be got in subjects free from general paralysis and syphilis and in a percentage of cases almost equal, although not greater than that of general paralysis.

(3) The reaction does not always give constant results, positive or negative, in the same individual, whether he is affected or not by general paralysis.

HAMILTON C. MARR.

*Fugues in Mental Pathology* [*Les Fugues en Pathologie Mentale*]. (Journ. de Psychol., July and Aug., 1909.) Benon and Froissart.

The first two portions of this paper are devoted to a critical discussion of the definition of a fugue and an extensive *résumé* of the literature of the subject. The authors then describe the various clinical varieties, viz.:

(1) Fugues in "second" states (ambulatory automatism), occurring in epilepsy, hysteria, and some alcoholic conditions. The normal passes into the "second" state abruptly, and the subject enters into a new life, usually without any dangerous reactions or extravagances. There is, subsequently, amnesia, more or less complete for the period.

(2) Psychasthenic fugues. As in all impulsive obsessions the idea of flight causes much anguish; the subject fights against it and eventually yields, experiencing much relief.

(3) Fugues in acute hallucinatory psychoses, confusional insanity. The fugue is frequently an instinctive act of defence in such conditions as flight from terrifying hallucinations.

(4) Fugues in chronic delusional states—flight from persecutors.

(5) Fugues in maniacal states. Such frequently occur in the prodromal state of hypomania, the motives being generally bizarre.

(6) Fugues in demented states. They are of especial importance in the earlier phases of dementia præcox, and are apparently motiveless.

(7) Fugues in children. Usually indicative of degeneration or moral perversion.

(8) Fugues among soldiers are usually examples of one of the above, but are especially mentioned because of the peculiar conditions of existence.

The differential diagnosis of fugues from allied conditions is discussed as well as the medico-legal aspects of the subject.

H. DEVINE.

*Neurasthenic headaches* [*La céphalée neurasthénique*]. (*Le Prog. Méd.*, Jan. 23rd, 1909.) Riche, A.

Headache is nearly always present in neurasthenia; at times it becomes the most prominent symptom. It is troublesome more from its persistence than actual intensity. More importunate than painful, its obsessing character augments the mental fatigue from which the patients suffer. It is either diffuse or localised to the forehead, eyes, root of nose, temples. Various comparisons are employed by the patients to describe their sensations, according to the locality affected. If diffuse, a feeling of emptiness, a foreign body in the head, a sensation as if the

brain were moving about ; if localised, a tight cord around the temples or metal band (occipito-frontal). Frequently they complain of a feeling as if a heavy helmet were being worn. Localised to the nose the sensation is that of a pince-nez too tight. The discomfort usually commences on rising in the morning, is temporarily relieved during meals, but is aggravated during digestion.

The writer discusses the differential diagnosis of this condition and the cephalgia associated with cerebral syphilis, tumour, auto-intoxications, Bright's disease, neuralgia, and migraine.

H. DEVINE.

*Clinical Contribution to the Study of Alcoholic Epilepsy* [*Contributo clinico allo studio della epilessia alcoolica*]. (*Arch. di Psichiat.*, vol. xxix, fasc. vi, 1908.) Ramella.

The case recorded in this paper is of interest as illustrating in a very striking way the rôle of an epileptic organisation in predisposing to pathological drunkenness. The patient was a man, æt. 40 ; no details are given with regard to his family history, and as to his personal antecedents it is merely stated that he had undergone thirty-five terms of imprisonment for drunkenness and minor offences. He was admitted to the asylum of Udine under the author's care four times, the symptoms on each occasion being practically identical, viz., psycho-motor agitation, hallucinatory disorder, suicidal and destructive impulses, all these symptoms clearing up within some twenty-four hours and leaving only a vague trace in the patient's memory. During one of his sojourns in the asylum he succeeded in getting access to wine, and drank a quantity equivalent to nearly two ounces of absolute alcohol. For an hour and a half no symptoms appeared, and then the patient became suddenly agitated and aggressive ; he showed symptoms of hallucinatory confusion with suicidal impulses ; there was general cutaneous analgesia, the pupillary reaction to light was almost lost, and the deep and superficial reflexes were increased. This condition quickly gave place to a stuporose state lasting about an hour, after which the patient had a series of typical epileptic seizures with enuresis. After a few days of post-epileptic dulness the patient got back to his normal level, but remembered nothing whatever about the attack.

W. C. SULLIVAN.

*The Clinical Examination of Painful Sensibility by Pressure* [*L'Exploration Clinique de la Sensibilité Douloureuse par la Pression*]. (*Bull. Soc. Clin. Med. Ment.*, March, 1909.) Cléramranet, M.

Pain upon pressure is only systematically looked for in certain organs, as the testicle, eye, etc., and in the trunks of nerves in certain diseases. The author hence advocates a more extensive application. He draws attention to the one which he terms the "*pression unguéale*." When the terminal phalanx is placed upon the table and pressure applied at the anterior extremity of the nail, an acute pain is produced. If the finger is in a state of semi-flexure, then pressure should be applied to curve the finger more, so as to make the end of the nail bend under the nail itself. The pain produced is piercing, immediate, and causes a complete muscular relaxation of the whole hand. If the finger is flexed, there is also produced some articular pain, which is due to the distension of the

ligaments. Both of these conditions manifest the deep sensibility. These pains are often abolished in general paralysis of the insane, rarely so in cases of hemiplegia, and are absent in patients with cerebral syphilis, or cerebral tumours with dementia. In acute alcoholism a hyperalgesia exists.

Pressure over the internal tibial crest causes, also, acute pain. This is absent in cases of tabes, but not so in dementia or cerebral syphilis. Similar pain can also be produced by pressure under the ear, over the second and third dorsal interossei, and in other muscles, such as the pectoralis major, especially at the place where the tendon emerges from the muscle.

If this pain upon pressure were more investigated, the author considers that it might often aid a diagnosis in certain diseases.

SIDNEY CLARKE.

*Juvenile General Paralysis [Un cas de paralysie générale juvenile].*  
(*Prog. Med.*, March 8th, 1909.) Remond and Chevalier-Lavaure.

These writers describe in the above journal a very good case of juvenile general paralysis in a girl. Nothing about her parents was known. The child developed more or less perfectly up to the age of fourteen, although her intelligence was somewhat limited and her reading defective, but her manual work was quite satisfactory to her masters. It was then noticed that her activity became less, she forgot to carry out orders, and her intellect became more enfeebled. She appeared to be too well developed for her age, as evidenced by her features, breasts, and pubic hair. Motor troubles then appeared, leading to ataxia; speech became defective, and the tongue was tremulous.

The tendon reflexes were abolished, but Babinski's sign was absent.

There was inequality of the pupils, the left being the larger, and the "Argyll-Robertson" syndrome was very clear. The disease progressed typically, and she died two years later.

At the autopsy the dura was thickened and fibrous, the arachnoid opaque, with opalescent tracts along the vessels. There was an abundance of cerebro-spinal fluid. The pia was very adherent to the brain, especially on the right side, and along the boundaries of the frontal and parietal lobes. There was marked atrophy in the frontal lobes, the ventricles dilated, and the surface over the grey matter irregular and rough.

Microscopically, sections stained by Nissl's, Van Gieson and Weigert Pal's stains confirmed the diagnosis.

The interest in this case lies in the fact that it occurred in a "feeble-minded," and its course was that of a purely progressive dementia, without any delusions of grandeur or of wealth.

SIDNEY CLARKE.

*The Slow Recovery in some Acute Mental Disorders [Guérison tardive d'états aigus graves].* (*Bull. Soc. Clin. Med. Ment.*, May, 1909.)  
Legrain, M.

M. Legrain calls attention to the slow recovery of some acute cases of insanity. It is well known that certain mental diseases are fatal, whilst in others the prognosis, although not absolutely grave,

is not at all hopeful, for the cerebral cells become completely disorganised. The duration of the illness, too, is a factor which has to be considered, and the longer it has lasted the more gloomy is generally the prognosis. But this is not always so, and he cites several cases which had been given up as hopeless, since they showed no improvement in periods of time ranging from two to six years, yet in which mental recovery took place quite unexpectedly. In consequence of this, he deems it advisable to discuss the subject in order to make one remember when giving a prognosis that tardy recoveries do occur.

SIDNEY CLARKE.

*Inborn Homosexuality and Pseudo-homosexuality [Echte Angeborene Homosexualität und Pseudo-homosexualität]. (Deutsch. med. Woch., No. 34, 1909.) Näcke, P.*

Näcke returns once more to the question of sexual inversion because he finds that many misapprehensions still prevail. This he puts down to the fact that the typical invert very rarely seeks medical aid, so that the commonest forms of this anomaly as well as its wide prevalence remain alike unknown. He mentions an early experience of his own, when, never having seen an invert, he asked Hirschfeld to send him two. When they arrived, one, to his astonishment, turned out to be a man he had known for sixteen years, a near relation of his own wife.

Näcke proceeds to distinguish between the genuine invert and the pseudo-homosexual person who is normal and merely adopts homosexual practices when separated from the opposite sex. Näcke definitely denies that true inversion can ever be produced by masturbation, seduction, imitation, etc., and he regards it as more than doubtful whether inverts can be considered degenerates; he has not found that they show an unusual number of stigmata of degeneration, and in general society they cannot be distinguished from other people. Näcke would punish the pseudo-homosexual person but not the true invert, who is to be regarded as a natural variation. Treatment he regards as useless, and he doubts whether either hypnotism, as practised by Moll, or the psycho-analytic methods of Freud's school can produce a really permanent result.

HAVELOCK ELLIS.

*So-called Moral Insanity [Ueber die Bewertung der Imbezillität und der sogenannten Moral Insanity in praktischer und forensischer Beziehung]. (Psych.-Neurol. Woch., No. 52, 1909.) Friedländer.*

The author emphasises the difficulty of diagnosis in those cases of psychic weakness in which the chief defect lies in the moral sphere. referring to a case in which seven opinions were all different (sexual neurasthenia, feeble mind, dementia præcox, etc.), while for the magisterial and lay mind the case was simply one of moral depravity. Such cases are very deceptive even for an experienced observer, and Friedländer considers that no report should be made after a mere short interview, but only after long-continued observation. With Mendel, Näcke, Hoche, Aschaffenburg and others, Friedländer refuses to accept moral insanity as an independent disorder, not because he has never seen a case of the kind, but because he believes that psychology and

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psycho-pathology forbid us to admit such isolated affections ; they fall with the old group of monomanias. In all these cases of moral psychic defect prolonged and thorough investigation will show that, though the ethical defect stands in the foreground, it is still possible to detect intellectual disturbances. Friedländer fails to add that this view is nowadays widely accepted even by those who consider it inconvenient to abandon a properly defined conception of moral imbecility.

In the remainder of the paper, the author discusses these cases in relation to the German law, and refers to the good effects of specialised medical and pedagogic treatment.

HAVELOCK ELLIS.

*Cerebral Tumours* ["*Tumeur de la dure-mère*" et "*Tumeur cérébrale latente*"]. (*Bull. Soc. Clin. Méd. Ment.*, No. 6 and 7, 1909.)  
Marie, A.

Cerebral tumours are always of interest, and Marie records the presence of a large one in two patients where nearly all of the cardinal signs and symptoms were absent.

In one there was a large tumour of the dura-mater about the size of an infant's hand. It appeared to be an organised blood-clot with central trabeculæ containing a pale yellow fluid. The alveoli looked like the grains of white grapes. The tumour lay over the right Rolandic area, extending towards the right frontal pole, and the cerebral cortex below it showed superficial areas of yellow softening. The patient at the onset of the illness had shown signs of mental weakness, which was followed by a noisy incoherence. With the exception of some muscular weakness, there was present no other sign or symptom to point to the diagnosis of the tumour, which was unfortunate, for it could have been removed by surgical treatment.

In his second case, there was a large, fibrous tumour lying under the frontal lobes in the middle line, greyish in colour, and of firm consistency. It was not adherent to the brain-substance save where it was attached by a small pedicle, and it seems to have originated from the pia-mater. The tumour had made for itself a large bed in the orbital surface of both of the frontal lobes by compression of the cortex, and it caused projections into each lateral ventricle. It was strange that it was unaccompanied by any signs of paralysis, convulsions, or sensorial troubles, and even the acute headache was absent. The patient became a senile dement, which possibly resulted from large areas of softening which were found in the other lobes.

SIDNEY CLARKE.

*General Paralysis and Symmetrical Gangrene of the Extremities* [*Paralysie Générale et Asphyxie symétrique des extrémités*]. (*Rev. de Psychiat.*, March, 1909.) Naudascher, G.

The writer gives the clinical account of two cases of general paralysis in which gangrene, symmetrical in its distribution and preceded by diarrhoea, accelerated death.

The first symptom of an abnormal type was diarrhoea, which was intractable to any line of treatment. In the first case, a month later œdema suddenly appeared in the legs, followed by the formation of



bullæ containing clear serum. The œdema was followed by a cyanosis of the skin covering the front of both feet. Later moist gangrene appeared and sloughing occurred. The lesions were remarkably symmetrical in every respect. At the *post-mortem* no arterial lesion was found to account for the condition.

Diarrhœa was, in the second case the first symptom, and this was followed in two days by œdema of the feet and legs, which in turn was succeeded by cyanosis. Bullæ next made their appearance, a large one being seen on the sole of the left foot. There was no corresponding lesion of the right foot. Gangrene of the toes was followed by two toes dropping off, and, notwithstanding a large ischio-rectal abscess, the patient for a time did well. At the end of nine months the œdema and cyanosis recurred in the right foot, gangrene of the moist type finally putting an end to life. The *post-mortem* showed marked endarteritis with consequent narrowing of the lumen of the femoral and popliteal arteries.

COLIN McDOWALL.

## 5. Pathology of Insanity.

*Symmetrical Apoplexy in the Region of the Cornu Ammonis in Epilepsy*  
[*Symmetrische Apoplexie der Ammonshorngegend bei Epilepsie*].  
(*Neur. Cbl.*, 1909, Nr. 7.) Hermann, Dr.

Meynert first drew attention to the pathological changes in the cornu ammonis in epilepsy. In most cases a condition of gliosis was found, which showed itself macroscopically in diminution and hardening, and microscopically in atrophic processes of the ganglionic cells and filling up of the spaces with neuroglia.

Until now only subjective opinions as to the primary or secondary nature of the change have been submitted, and some writers have assigned no special significance to the changes in the cornu ammonis, contending that they are only part of a gliosis common to the whole of the cortex. But there have been cases in which thorough microscopic investigation showed that the signs of gliosis were confined to the cornu ammonis, and while these cases give the impression of a primary, perhaps even a congenital disturbance, the cases described by Alzheimer and others in which a diffuse gliosis of the superficial layers of the cortex was found point to a secondary disturbance—more an explanation for epileptic dementia.

It is difficult to determine whether a primary or a secondary rôle should be assigned to other changes in the cornu ammonis. In older works we find cases quoted where there was serous softening, softening with redness, redness only, with spot-like extravasations of blood, all accompanied by venous hyperæmia of the brain. Death in these cases having taken place during coma or a fit, the conditions found may certainly be said to play a secondary rôle. Other cases are quoted where one or both cornua had developed tumours. Dot-like hæmorrhages in the grey matter of the cortex are often described, and may be likewise due to passive hyperæmia during a fit. Recent microscopic examinations have unfailingly discovered some of the vessels in the

process of gliosis, and in this area especially, if it is in the cornu ammonis, there is seen a new structure and increase of blood-vessels with thickened walls and abundant endothelial cells. The vessels are widened and filled with blood and blood-corpuscles. Hajos found, in early cases, miliary aneurysms in the cornu ammonis. He was of opinion that the breaking up of the vessels depicted an inflammatory process. He emphasised the fact that there was sometimes a serous softening in the cornu ammonis and its neighbourhood unlike gliosis, and he put special stress on the fact that this process, which he said was rare, confined itself to the cornu ammonis. From the development of miliary aneurysms to apoplexy is only a step. Formerly great importance was attached to overflow of blood in the cerebral meninges at the base of the fourth ventricle, and also in the cornu ammonis. In 1862, Hoffmann described two cases of capillary hæmorrhages in the cornu ammonis as the causes of death in two epileptics. Schröder van der Kolk mentions an old apoplectic cavity in the right posterior lobe, affecting a pillar of the fornix, the gyrus fornicatus and the uncus.

Among later writers, Orloff, in the case of a man, æt. 28, who, without fits or other physical signs, died in a state of coma, found extreme fulness in the vessels of the right and of the left cornu ammonis, and in the cortex of the left hippocampal fissure single torn vessels with fresh blood extravasation in the perivascular hollow. At the same time there was gliosis of the cornu ammonis, as also of the rest of the brain.

The case described by Dr. Hermann is that of a man, æt. 28, who had suffered from epilepsy since the age of twenty-three. In the course of left-sided exudative pleurisy with diffuse peritoneal tuberculosis, there was drowsiness on the third day, and the patient died in a state of coma, without signs of fits, dyspnoëic or cardiac symptoms, on the fourth day.

*Post-mortem* examination showed a red softening, the size of a hen's egg, in the neighbourhood of the cornu ammonis (left side), and numerous extravasations of blood, from the size of a pin-point to the size of a grain of rice, in the hard part of the cornu ammonis at the right side. Both hæmorrhages had a fresh appearance, and we may take it that the sleepiness resulted from hæmorrhage, the direct cause of which might be the large exudation with its pressure working on the upper vena cava. There were no clinical or anatomical signs of a larger engorgement, and all the more on this account the vessels of the cornu ammonis represent a *locus minoris resistentiæ*. Even if the disease and hæmorrhage of the vessels of the cornu ammonis are of a secondary nature, the relation of the cornu ammonis to genuine epilepsy on account of these conditions is quite apparent.

HAMILTON C. MARR.

*On the Pathology of Dementia Præcox and on the Acute Phases Present*  
[*Sulla patologia della Demenza Precoce e sulle fasi acute che in essa si presentano*]. (*Riv. Sper. di Freniat*, vol. xxxiv, fasc. iii, iv, December, 1908.) Pighini, G.

The clinical unity of dementia præcox with its rich variety of forms is by many held to be one of the finest conquests of modern psychiatry, but it must be conceded that this unity is but the outcome of the happy constructive mind of an acute observer, and is not based on the recog-

nition of a well-defined and distinct morbid agent. A pathological basis for the disease would certainly be the ideal one, and Kraepelin himself has frankly admitted as much.

In the present communication, Pighini gives the result of his attempts to arrive at a definite finding. He is forced to confess that the primary and essential morbid agent is still wholly unknown, but he gives a contribution to the pathology of dementia præcox that promises to lead to a clearer understanding of the disease. He holds that, with the exception of the morbid alterations in the brain (cell atrophy, chromatolysis, increase of neuroglia in the various zones and especially the deeper layers of the cortex), all the hitherto published anatomical alterations may be regarded as purely secondary. He has certainly, in numerous autopsies, found thickened meninges, cerebral swelling, various alterations of the thyroid, parathyroid, liver, pancreas, kidneys, adrenals, ovaries, testicles, etc. (for almost every organ and tissue in the body has been included in the pathological literature of the disease), but he has even more frequently found the cerebrum normal in appearance and every organ in a healthy state, always excepting, of course, the specific lesions of the *causa mortis*, such as tubercle, pneumonia, etc.

In studying the metabolic processes in various cases of dementia præcox, Pighini was struck by the fact that whilst in some there was evident an accumulation and retention in the balance of nitrogen and phosphorus, in others there was an increased elimination of these elements. These apparently contradictory findings were explained away by a careful study of the clinical course of the disease. Pighini believes that insufficient consideration has been given to the features that distinguish the initial and acute from the subsequent and more chronic phases of the disease. In the acute stage, the characteristic features are motor agitation, quickened pulse and respiration, elevation of temperature, dilated pupils, exaggerated tendon reflexes, muscular tremors, acetonic breath, frequent sitophobia, excretion of urine rich in nitrates, phosphates and sulphates, and rapid loss of weight. To these physical signs are joined mental confusion, hallucinatory delirium and psychic excitement. He gives a minute account of thirteen cases in which he has investigated the metabolic processes and studied the clinical course, and arrives at the conclusion that in the acute phases there is a destruction of nucleo-proteids (phosphates and sulphates) not present in the chronic phase. The loss of weight and the increased temperature found in the acute phase probably result from the proteid decomposition in the organism, due to morbid conditions as yet unknown. What tissues or cells are precisely the seat of this destructive process we do not know, but the evidence we have suggests that at least the nervous tissue is involved. While symptoms of nervous excitement or irritability of the cerebral nervous tissue dominate the acute phases of dementia præcox, the symptoms of mental *deficit* which soon follow and initiate the true dementia indicate something more than the effects of a simple irritation, rather a true organic *deficit*, or in other words, a material alteration in the tissue. Histological examinations agree in showing systematic lesions in the cerebral cortex of the subjects of dementia præcox, even in the early stages. Koch, investigating the sulphur compounds in the cerebral cortex of precocious demented, found a marked

diminution of neutral sulphur and an increase of the inorganic sulphur as compared with the normal—a very important finding, which, if confirmed and followed up, may yet let us know what constituent of the nervous system is the elective seat of the unknown destructive *quid*. Pighini suggests that the destructive process may not be limited to the cerebral substance. The marked daily loss of nitrogen, phosphorus and sulphur indicate an extensive dissolution of proteid substances over a wider base. Some part may be played by the blood-forming organs and the blood, in which various observers have noted a marked hyper-leucocytosis, precisely in the acute stage of the disease. To sum up we would have in the primary phases of dementia præcox a destructive process in action. In the later stages this process would be spent and we would have left only anatomical and functional lacunæ.

J. H. MACDONALD.

*Neuroglia in the Brains of the Insane* [*Neurogliabefunde in Gehirnen von Geisteskranken*]. (*Psych. Neur. Wochens.*) Von Elingner.

From various parts of the brain small pieces of tissue were taken and hardened in 10 *per cent.* formalin. Subsequently the staining by Weigert's method for neuroglia was employed. Fifty-seven brains were submitted to this process, the majority of which were taken from cases of dementia præcox (twenty-three). Others included thirteen several forms of insanities. The ages of the cases of dementia præcox ranged from seventeen to seventy-four, and the duration of the disease varied from three months to thirty-seven years. In thirteen cases there existed distinct thickening of the neuroglia in the cerebral cortex. This consisted in an increase in the glia-fibres, the glia-cells being scarcely at all increased in number. In the great majority of these cases the disease had lasted for over ten years and had passed into dementia. In ten out of the twenty-three cases there was absolutely no increase of neuroglia. These were cases which lasted from a few months to, at most, a few years.

The author concludes from an examination of the cases of dementia præcox that there is no proliferation of the neuroglia in the early years of the disease. After it has lasted ten years there occurs thickening of the cortical neuroglia. The same holds good of the other varieties of the insanities examined. In progressive paralysis and senile dementia there is marked proliferation of the neuroglia when the disease has existed for only a short time.

J. R. SUTHERLAND.

*The Fissures and Convolutions of the Insane Brain* [*Sillons et Circonvolutions du Cerveau des Aliénés*]. (*Arch. de Neur., Jan., 1909.*) Mingazzini, G.

Professor Mingazzini publishes his studies of the fissures and convolutions of the brain, giving also the opinions of other authorities. It has been questioned whether such studies are of great value, but the problem nevertheless remains, and is of morphological interest. His paper contains a large amount of detailed information.

Discussing the fissure of Rolando, he states it is poorly developed in



idiots, and sometimes an interruption of this fissure has been observed through one of the frontal convolutions passing directly into the parietal lobe. The fissure in certain of the insane lies nearer to the frontal pole, similar to the position seen in apes, indicating a poor development of the frontal lobes. Normally in the male this fissure is absolutely and relatively longer than in the female, but it may not be of equal length in each hemisphere. In idiots the frontal lobe is very simply marked, especially the lower gyrus, but the parietal lobe shows but few variations. The opercula in idiots do not often completely cover the island of Reil.

From his observations he divides these anomalies into two classes. The one indicates arrests of development to which he assigns the incomplete sulci, which divide the frontal convolutions, and the tendency of the fissure of Rolando to keep its infantile type—that is, a diminution in its length and the disappearance of the differences pertaining to the sex. The other class embraces those of phylogenetic origin, and to this group belong anomalies, as the absence of communication of the calcarine with the parieto-occipital fissure, a rudimentary development of the third frontal lobe, of the anterior branch of the Sylvian fissure, of the fissure of Rolando, and of the convolutions of the island of Reil.

Finally, he says these anomalies, especially those appearing in the second group, predominate in idiots when compared to those observed in the other forms of insanity, and the brains in idiots often present relics of morbid and rudimentary processes dating from foetal life.

SIDNEY CLARKE.

*The Persistence of the Neuro-fibrillæ in General Paralysis* [*La persistance des neuro-fibrilles dans la Paralyse Générale*]. (*Bull. Soc. Clin., Feb., 1909.*) Dagonet, J.

By special methods of staining, a fibrillation of the protoplasm of nerve-cells has been demonstrated, which according to some authorities is an artefact. The writer considers them, however, to be paths of conduction common to several cells; the neuro-fibrillæ traverse several cells and their protoplasmic prolongations form an extraordinary rich extra-cellular network. When passing through the nerve-cell, the principal fibrillæ anastomose by secondary fibrillæ or by an extremely fine network. From an investigation of these neuro-fibrillæ, Cajal's silver method being employed, the writer finds that the results of his researches in cases of general paralysis are not in agreement with other workers. The neuro-fibrillæ were not thickened save where they joined together, nor was their coloration more intense, and they were continuous. They persisted in badly damaged cells with the exception of the pyramidal cells, for in these the lesion is generally diffuse. All the nervous elements are altered and disappear in general paralysis, and the neuro-fibrillæ are really no exception to this statement, but their changes are of small import, being secondary. The neuro-fibrille in general paralysis is the *ultimum moriens*.

SIDNEY CLARKE.

*On Epilepsy in Senile Dementia* [*De l'épilepsie chez les déments séniles*]. (*Rev. de Psych., Feb., 1909.*) Marchand, L., and Petit, G.

Since the epileptic fit may appear in every form of cerebral disease, the authors consider it now out of place to call epilepsy an idiopathic



disease, but it should be regarded only as a symptom. Epilepsy appearing after the age of thirty (*épilepsie tardive*), even if unaccompanied with mental disorders, always permits a diagnosis of cerebral lesions as a cause of the onset.

From their observations, the authors say that epilepsy may appear in the course of senile dementia, just as it does in the other varieties of dementia. The fits are few in number, generally appearing in the last stage; vertigo, the trance-like condition and the automatic post-epileptic actions, are but rarely seen. Disorders in speech are very common after the epileptic attacks in these aged patients, but they are not the result of localised lesions in the speech area, but arise more probably from an increased state of dementia. The cerebral lesions of senile dementia with epilepsy consist of a superficial diffuse sclerosis of the cerebrum with marked alterations in the tangential fibres, and of patches of sclerosis following atheroma of the cerebral vessels.

SIDNEY CLARKE.

*Statistics relating to the Percentage Incidence of Intra-cerebral and Subdural Hæmorrhage and Deposit in the Insane. (Arch. of Neur. and Psychiat., vol. iv, 1909.) Mott, F. W.*

Dr. Mott has collected the statistics relating to the above subject from the records of 1,926 necropsies conducted at Claybury Asylum during the last ten years, and deduces the following conclusions from the table he has compiled. The total percentage of intra-cerebral hæmorrhage was 1·2 *per cent.* Except in two cases of doubtful general paralysis the hæmorrhage occurred in cases other than of that disease. There appeared to be, especially in males, two separate morbid conditions as regards subdural hæmorrhage and deposit: (a) Cases of undoubted subdural hæmorrhage in elderly people (among females this class was not in evidence) associated with arterial degeneration and cardiac hypertrophy; (b) cases of membrane formation of a similar nature to that found in general paralysis. Combining the intra-cerebral and subdural types of hæmorrhage in all the necropsies made, he found these cases numbered about 2 *per cent.* Chronic vascular and renal disease were associated with these cases in practically every instance. This is a condition markedly different, he points out, from that found in cases of chronic pachymeningitis, in which the heart, together with the other viscera, usually showed some wasting, especially in cases of general paralysis.

A. W. WILCOX.

## 6. Treatment of Insanity.

*The Psychological Principles and Field of Psycho-therapy. (Journ. of Abnorm. Psychol., June-July, 1909.) Prince, Morton.*

In order to employ psycho-therapy in an efficient manner it is necessary to clearly understand the underlying psychological principles. These may be described under the following headings:

(1) *Complex formation.*—A "complex" consists of a number of

associated ideas, emotions, sensations, etc., linked together into a system, so that stimulation of one element of the group stimulates the activity of the rest of the group. Such complexes may be either normal or morbid, *e.g.*, phobias, fixed ideas, etc. The process by which certain of these syndromes are created is educational. Hence it should be possible by educational methods to disintegrate complexes which have become harmful to the personality.

(2) *Conservation*.—Complexes tend to be conserved. They may be conserved in the unconscious, and only be actually reproduced at intervals, *e.g.*, obsessions, phobias, etc. A complex may be perfectly conserved, although we are unable to voluntarily reproduce it. This is shown by its appearance in hypnosis or in dreams—in the latter case it expresses itself in a distorted form. A complex may be organised and conserved whether it is formed in the waking state or in hypnosis. In the latter case the elements of the hypnotic complex may enter the stream of everyday life and modify it.

(3) *Dissociation*.—Dissociated systems of ideas explain somnambulisms, paralyses, anæsthesias, etc. The important fact here for psycho-therapy is that it is frequently possible to produce dissociation and synthesis by artificial means, *e.g.*, suggestion.

(4) *Sub-conscious ideas*.—The dissociated systems function independently of the personal consciousness, as a “subconscious,” or, better, “co-conscious” system, *e.g.*, hysterical anæsthesia. To re-synthesise these systems with the personal consciousness is to make the patient aware of the dissociated ideas, and hence to remove the anæsthesia, etc.

(5) *Automatism*.—This plays a large part in normal life—for example, habit-actions, and absent-minded acts. The automatic activity of complexes of ideas has been demonstrated by Freud, Bleuler, and Jung. This automatic activity affects the personal consciousness in various ways—sudden appearance of ideas without relation to remainder of conscious stream, hallucinations, etc. Morbid phenomena arising in this way can be removed by the re-associating of the split-up personality.

(6) *Emotional energy*.—Exalting emotions have an invigorating, synthesising effect, while depressing emotions produce disintegration. It is possible to modify the personality at will by measures which make use of this principle.

All the above tendencies govern normal functioning; it is only their perversion which constitutes functional disease. All these principles are made use of in psycho-therapy.

If we are dealing with a case exhibiting unhealthy ideas, habits of morbid introspection, baseless apprehensions of disease, then the method employed is the organisation and substitution of healthy complexes for the unhealthy ones actually present. Old ideas are modified by being interwoven with new. Finally the therapeutic complex thus formed is conserved in the unconscious, ready to be reproduced when necessary. It matters little whether these complexes are organised in the waking state or in hypnosis. Hypnosis is only necessary in a minority of cases where it is considered that suggestibility should be increased.

When dissociation exists, re-association must be employed. There are various methods—Freud’s psycho-analysis, suggestion in waking

state, hypnosis, hypnoid states, etc. The autonomous complex must be broken up, or its elements re-synthesised into a healthy complex, or antagonistic ideas must be suggested.

All psycho-therapeutic measures pre-suppose a thorough study of the individual psychology of the patient. BERNARD HART.

*Psycho-Analysis in Psycho-Therapy.* (*Journ. of Abnormal Psych.*, June-July, 1909.) *Jones, Ernest.*

Psycho-therapy is a means of alleviating certain disorders by purely mental methods. Formerly such methods were employed empirically, no real attempt being made to explain the *modus operandi* of the treatment. Owing, however, to the psycho-analytic methods formulated by Freud, a more complete understanding of the nature and origin of abnormal mental states has been gained and the treatment placed on a scientific basis.

The author proceeds to describe the essential features of Freud's psychology, which may be summarised as follows. The various symptoms observed in the psycho-neuroses result from two groups of ideas which cannot be brought into harmony with each other. The personality is unable to assimilate a certain "complex," with the result that the latter is suppressed from consciousness and takes on an independent existence, its activity being represented indirectly and in distorted form. This distortion in the manifestation of the complex is often exceedingly involved, the connection between it and the symptom being therefore correspondingly difficult to unravel.

Every psycho-neurotic symptom may thus be said to result from a submerged mental complex or wish. The affect of the original complex being unable to find direct expression becomes transposed to some indifferent mental (phobia, obsession) or bodily process (paralysis, tremor). The symptom is thus the unconscious gratification of the suppressed wish.

The aim of the psycho-analytic method is to enable the patient to discover the significance of the mental process manifested as a symptom. The author details the various procedures which may be adopted. Such are, hypnosis, "free association," and Jung's word-reaction association method. Hypnosis is now but seldom employed.

The writer points out that these procedures are the reverse of suggestion, in which the physician adds something to the patient's mind—belief, confidence and the like. In psycho-analysis he takes something away, *viz.*, inhibition. The chief aim is to give the patient self-mastery and an understanding of the confusions of his mind, contrasting thus with the dependence fostered by crude suggestion. H. DEVINE.

*Therapeutic Indications for the Treatment of Insomnia* [*Les Indications Thérapeutiques dans le Traitement des Insomnies*]. (*Le Prog. Méd.*, Oct. 2, 1909.) *Baufle, Paul.*

The sedatives of the opium group have been known for centuries; to these modern pharmacological progress has added two additional main groups, chloral and its derivatives, and the sulphonal, trional and veronal group; in fact, we have now so many sedatives at command that we can rarely fail in ordinary cases to secure sleep for a night or

two. But, the author goes on to point out, sleep thus obtained is artificial; it is a sleep of intoxication and is, therefore, far less recuperative than natural sleep. We cannot suppress the nervous irritability which is the immediate cause of the insomnia without inducing in the nerve-cells functional troubles, which may be and often are, worse than the insomnia itself. Moreover, all sedative drugs produce functional troubles by their effects on other organs than the cerebral cells, more marked in proportion to the magnitude of the dose administered; whilst if we try to avoid these by giving minimal doses, we find that our would-be calmative has an exciting influence. Finally, we have to take into consideration, first, the loss of effect which commonly results from repeated administration, and secondly, the various inconveniences and dangers of habituation—the most obvious and familiar of these being chronic morphinism. For these and other reasons, in the treatment of insomnia we must, as far as practicable, avoid merely symptomatic treatment by means of sedatives and hypnotics; we must search for the causes of the insomnia and grapple with these. The author then proceeds to the application of this sound principle. It will not be possible here to give more than the outlines of his classification.

The first and one of the most important groups of cases is constituted by the insomnia consequent upon pain. Here, of course, the therapeutic indication is clear whenever the source of pain is manifest and remediable. When sedatives are used the opium group is alone available, since the hypnotics of the other two groups have little or no analgesic influence. But we must always be on our guard against the false appearance of safety which may result from the administration of opium (in appendicitis, for example). The next group is that of the insomnias occurring in the acute infective disorders. Here the insomnia, like the primary disease, is necessarily of limited duration, and measures directed against the primary disorder are more useful than hypnotics (hydrotherapeutic procedures, for example, in typhoid fever). The writer's next group is that of the insomnias occurring in connection with the chronic intoxications, with alcohol, morphine, etc. To the readers of this Journal, the most interesting paragraphs of this section will be those relating to the insomnia of delirium tremens. Every experienced practitioner will endorse the writer's statement that in many cases of delirium tremens the physician will essay in vain all the resources of hypnotic medication. Physical methods should first be tried, wet pack, cold baths, prolonged tepid baths; of hypnotic drugs, chloral and opium<sup>1</sup> are the most useful; in some cases cannabis indica has given good results; the tincture may be used in doses of one to 20 minims, but the correct dosage is difficult to determine since the activity of the drug varies greatly in different specimens, and individual idiosyncrasy is marked in regard to it. Finally, there is the old English method of administering heroic doses of digitalis; and the recently recommended hypodermic injection of scopolamine in doses of  $\frac{1}{800}$  to  $\frac{1}{400}$  of a grain, but this last-named drug he considers untrustworthy and dangerous. The next group of

<sup>1</sup> I cannot agree with Baufle here, for I consider the use of opium extremely dangerous in alcoholic delirians. In them, alarming symptoms of morphine intoxication sometimes rapidly ensue from ordinary medicinal doses.—M. E. P.



insomnias comprises those that occur in meningo-encephalic affections. I pass over the insomnia of organic brain disease to speak of the author's views regarding the treatment of insomnia in the insane. Insomnia is often an early symptom of insanity, and may at times be an isolated symptom; in such cases, since protracted insomnia is disastrous to the cerebral functions, the question may arise whether the sleeplessness is to be regarded as cause or as effect. Insomnia may also be persistent in advanced mental alienation, and it then aggravates the mental and physical troubles of the sufferer. We must contrast those suffering from acute mania, who may be sleepless for weeks or even months, with those suffering from dementia, who sleep by day as well as by night. Where, as so often in cases of mental disorder, the causes of the trouble are beyond our reach, the use of hypnotics is imperative. Opium, often valuable in depressive cases, must be avoided in those with cerebral excitement; in these latter, chloral and its derivatives are often valuable. Sulphonal is a rather uncertain drug in its influence on the insane. Paraldehyde is one of the most rapid and certain hypnotics in the sleeplessness of the insane, and it does not, like chloral, lower the blood-pressure; but its disagreeable taste and the odour it imparts to the breath render its use difficult; and though successful at first in doses of 30 to 90 minims, it soon loses its effect by repetition. It may advantageously be combined with the bromides, which, if less rapid than other hypnotics, do not so soon induce toleration.

Hitherto the writer has been concerned with symptomatic insomnias, the cause of which is usually manifest. In many other cases, in which the patient consults us on account of sleeplessness, apparently "idiopathic," careful investigation will nevertheless reveal the constitutional cause, and furnish the true indications for treatment. Thus insomnia may be the chief, or even the sole, symptom of many digestive disorders; and this is above all apt to be the case in the digestive disorders of childhood. Other symptomatic insomnias are those that result from respiratory affections, from cardio-vascular disorders, from renal troubles, and from syphilis. Fournier, in especial, has drawn attention to the persistent sleeplessness that sometimes occurs in the late secondary stages of syphilis, often in cases in which the symptoms of the underlying disorder are masked. Ascertain the true cause and the physician can work marvels. These are patients for whom mercury and iodide of potassium are powerful hypnotics.

The insomina of elderly persons is often due to one of the before-mentioned disorders, and with especial frequency to chronic arterial and renal changes. It is in these patients, and also in the last to be mentioned and most troublesome of all the symptomatic insomnias—the insomnia of neurasthenia—that the greatest caution has to be exercised in the use of hypnotics, since the underlying causes are long-enduring and drug habits are so easily induced.

Finally we have to recognise the existence of *constitutional insomnia*, in persons who sleep only three or four hours a night, and even less, without suffering physically or mentally. For this, of course, treatment is not requisite, nor is it likely to be effective.

M. EDEN PAUL.



*Isolation in the Cure of Psychoneuroses* [*Le Rôle de l'Isolement dans le Traitement des Psycho-Neuroses*]. (*Gaz. Méd. de Paris*, April, 1909.) *Valentine, Paul*.

The writer starts with the conception that psycho-neuropaths are, broadly considered, persons with an inadequate capacity for adaptation to their social environment. The struggle for existence is for them too severe or too deceptive; they endure badly the shocks, the uncertainties, the privations, the surprises, and the sorrows of life. According to the particular abnormal mode of reaction to their environment we distinguish among them hysterics, neurasthenics, epileptics, the obsessed, toxico-maniacs, mattoids, and borderland cases. Sooner or later such persons commonly come under treatment; the problem we have to consider is how they may best be restored to an approximation to normal mental and physical health sufficient to enable them once more to play their part in ordinary social life.

Such persons suffer from two main sources of disorder: their nutrition is congenitally faulty—dystrophia; and their nervous working exhibits the characteristics of irritable weakness—dysphoria. Ultimately these two sources of disorder act on one another in such a way and to such a degree that a vicious circle is set up, and they become unfitted for ordinary social life. How are they to be restored?

As far as the nutritive element is concerned we must attempt to regulate metabolism by means of attention to diet, elimination, exercise, and by gymnastics, massage, electricity, hydro-therapeutics, change of air, etc. When we turn to consider the primarily nervous sources of disorder it is obvious that the environment in which this latter has originated is one ill-adapted to promote the recovery of the patient. "If the patient has a family, this will, with rare exceptions, be found to be a forcing-house for the maintenance and multiplication of pathological disturbances. Mutual suggestion between brothers and sisters, between parents and children, continually reinforces the morbid ideational associations. Granted the rôle of inheritance in the origination of psychoneuroses, it would be very surprising indeed were this not the case. Hence the almost invariable failure of those practitioners who persist in treating such patients in their own homes." If the patient have no family, still, in his old home he will be influenced by the old associations—recollections of the gaming-table, the practice of some form of sexual fetichism, or what not—which, from the nervous side, have contributed to the production of his disorder. The more carefully we study these cases the more evident becomes the importance of therapeutic isolation. But its use must be thoroughly understood to enable us to apply it with discretion.

Until a few years ago isolation in an asylum was synonymous with solitary imprisonment; the patient was entirely cut off from the normal world. Then, as soon as he was regarded as cured, he passed at one bound from this quasi-conventual condition to the complex life of every day, for which his nervous system had now become unfitted by prolonged inaction. But the relapses which so frequently resulted from this mode of treatment have led, in France and elsewhere, to an attempt to combine the advantages of a provisional isolation with means to fit

the patient for his anticipated return to the realities of ordinary life. Instead of solitary confinement for our psycho-neuropaths, we endeavour to secure a progressive re-education of their will, whereby they will be enabled to take their places side by side with normal members of society.

With this end in view, the technique of the suggestive method has been re-modelled. Not only do we endeavour by this means to procure sleep and rest, to relieve physical pain and mental distress; we now also employ a mode of "mental orthopædics." A dialectic at once sympathetic and firm, infrangible and supple, adroit and persuasive; such is the method initiated by Dubois, of Berne, and now utilised by the great majority of psycho-therapists. The re-education of the patient must be adapted at once to the special psycho-affective type of the individual patient, and to the conditions of life to which he will have to return. It is needful that the patient should have absolute confidence in his physician, and that the latter should himself have sufficiently broad knowledge of general pathology, literature, history, art, and above all of philosophy; for nothing will be more effective for the correction of the ego-centric error of the neuropath than to introduce him, even in a fragmentary and superficial manner, to a positive knowledge of man and the universe.

Before returning to normal social life the patient should pass a period of probation in family life under continued medical supervision.

[English experience of the application of psycho-therapeutic methods to the insane has been far less encouraging than would appear from the above paper to have been the case in France.] Dr. Paul Valentin concludes what most English alienists will, I think, be inclined to regard as a somewhat fanciful essay in the following terms:

"I conclude, therefore, that the *maison de santé* of the future for the use of psycho-neuropaths will bear no resemblance whatever, either from a distance or on close inspection, to a convent or to a prison—nor, indeed, will it resemble, as some hypnotists appear to wish, the Palace of the Sleeping Beauty. It will be a medical home, part hospital, part school, and part private house, in which the effects of isolation will be tested by a preliminary experience of social life; it will ultimately attain the rank of a true 'institute for the accomplishment of human perfection.'"

M. EDEN PAUL.

## 7. Sociology.

*On Penal Responsibility* [*De la Responsabilité Pénale*]. (*Bulletin de la Société de Médecine Mentale de Belgique*, No. 144, April, 1909.) Francotte.

In this paper, read as the introduction to a discussion on criminal responsibility in mental disease, Dr. Francotte has dealt chiefly with the question as it regards the feeble-minded or the "borderland cases" of Maudsley. The author goes over very much the same ground as was covered in the debate between Ballett and Grasset at the Congress of Geneva, his conclusions agreeing in the main with the views put forward by the second of these alienists. He proposes that the law should explicitly recognise the existence of what Grasset has termed the "demi-

fous," and that it should sanction in their favour the principle of diminished responsibility. To give practical effect to this principle, it is suggested that such criminal defectives should be subjected to a modified asylum treatment "instead of or concurrently with legal punishment" (en place de la peine ou concurrement avec celle-ci), and further, that their liberation should be at the discretion of the judicial authority acting with medical advice, and should be on conditional licence, with some arrangement for regular supervision. By these means the author considers that it should be possible to avoid the dangers which attend the admission of the principle of partial responsibility in the existing state of the law; and this admission, as he rightly points out, however objectionable on theoretical grounds, is certainly inevitable in practice.

W. C. SULLIVAN.

*The Relation of Alcohol to Feeble-Mindedness. (Brit. Journ. of Inebriety, vol. vi, No. 3, January, 1909.) Potts, W. A.*

In this paper, read as an introduction to a discussion at the Society for the Study of Inebriety, Dr. Potts summarises some of the many discordant opinions which have been advanced with regard to the influence of ancestral alcoholism in the production of mental defect, and refers to his own very interesting observations on the subject which have been published in the records of evidence taken by the Royal Commission on the Feeble-minded. Dr. Potts worked out the family histories of 250 mentally defective children in the special schools at Birmingham, and as a control made similar inquiries regarding 100 normal children from the same districts in that city. While the result of his investigations led him to take the generally accepted view that the origin of congenital defect is usually complex, he also satisfied himself that parental—or rather ancestral—alcoholism is one of the more important causative agencies. Thus he found an alcoholic heredity in the direct line in 41·6 per cent. of the feeble-minded children, but only in 22 per cent. of the ordinary children of the same social status. In 5·2 per cent. of the former group both parents were intemperate, while in only 1 per cent. of the normal children was this convergent heredity observed. The author's general conclusion is "that the evidence is not clear that alcoholism, by itself, in the father will produce amentia; but it is quite plain that in combination with other bad factors it is a most unfavourable element, while maternal drinking, and drinking continued through more than one generation, are potent influences in mental degeneracy."

A number of interesting criticisms of Dr. Pott's paper, contributed by Dr. Clay Shaw, Dr. Harry Campbell and others, give further proof of the wide differences of opinion which still prevail on this question.

W. C. SULLIVAN.

*Feeble-mindedness and Juvenile Delinquency. (Reprint from Charities and the Commons, May, 1908; published by the Wright and Potter Printing Co., Boston.) Evans, E., and Dewson, M.*

The ladies who have written this paper have given to it the subtitle of "A Study from Experience," the experience having been acquired in connection with the work of the Waverley School for the

Feeble-minded, in Massachusetts. This institution possesses a custodial department to which any person who has been certified as a "suitable subject" may be committed by a judge of probate. What constitutes a "suitable subject" has not been defined by statute, and is apparently settled in each case at the discretion of the committing authority. It is the aim of the writers of this paper to show that lack of capacity for self-direction and self-support rather than mere lack of scholastic capacity should be the proper ground for custodial care.

Particulars are given regarding 150 feeble-minded girls from the Lancaster Industrial School, of whom 45 were sent to Waverley for permanent care, while the others either remained in the Industrial School or were tried at large on parole. It is found that the girls sent to Waverley can be detained with a minimum of restraint; they live contentedly, and under direction do work of distinct economic value. Of the others the large majority, including practically all whom the parole officer would have put in the category of "suitable subjects," have gone to the bad when allowed at liberty; they have become prostitutes, criminals and drunkards, and have been prolific breeders.

Quite different results were found in the case of feeble-minded boys. In the first place their number was much smaller: of 1,625 boys in the Lyman Industrial School at Westborough only 26, or a little more than 1.5 *per cent.*, were found to be so defective as to be considered incapable of self-direction, while the corresponding ratio in the Lancaster girls was over 5.5 *per cent.* Again, while the experiment of trying the defective girls at large generally resulted in failure, many of the more distinctly defective boys showed a quite unexpected capacity for making their way in the world. Thus of the 26 already referred to, 7, though considered suitable cases for Waverley, were not sent there but were liberated on parole, and all but one of them became fairly steady wage-earners. Moreover, several boys of this class who were actually sent to Waverley ran away, and in some instances at all events proved themselves capable of earning a livelihood at large. It is interesting to note that amongst feeble-minded boys those who did worst and showed actively antisocial tendencies were those who were least feeble-minded.

Commenting on these results the authors point out that the experience of Waverley goes to show that custodial treatment is both easier and more necessary for feeble-minded girls than for feeble-minded boys. The inert and passive type of defective can be kept under detention with little trouble, and this applies, of course, to both sexes; but while in the case of the boy the absence of such care is likely to lead only to his being an under-fed loafer or thief, the girl in the same circumstances can support herself by prostitution, or—what is even worse for the community—by marriage, becoming in either alternative a source of danger to society and deteriorating morally and physically; the struggle for existence might be a useful stimulus to the feeble-minded boy, but it is never so to the girl. "All of which," the authors affirm, "goes to justify the conclusion that the feeble-minded problem may almost be disregarded in connection with a boy's reform school, while in connection with a girl's reform school it takes on very large proportions."

W. C. SULLIVAN.



*The Beginnings of Criminal Antropology* [*Des Origines des l'Antropologie Criminelle*]. (Bull. de la Soc. de Méd. Ment. de Belgique, Feb., 1909.) Meeus.

In his presidential address to the Belgian Société de Médecine mentale, M. Meeus, the well-known physician to the colony of Gheel, has set himself the task of tracing out in the medical literature of the last century the rudimentary form of those ideas which in their later developments have become familiar as the theories of criminal anthropology. M. Meeus deals chiefly with the writings of the French psychiatrists, and appears to be less well acquainted with the works of the English and German observers. He shows, however, a due appreciation of the immense influence which Maudsley's teachings have had on the scientific study of crime. An address of this kind cannot be expected to contain much that is novel; but English students of criminology will be grateful to M. Meeus for calling their attention to a comparatively unknown precursor of Lombroso, a Dr. Barbaste, who in 1856 published a work under the title of *De l'homicide et de l'anthropophagie*, in which he appears to have anticipated in a very curious way several of the ideas of the Italian master, including even the famous atavistic theory of crime. Judging from the extracts given by M. Meeus, Barbaste's views on the psychology of the criminal would seem to have shown remarkable originality and acuteness.

W. C. SULLIVAN.

## 8. Asylum Reports issued in 1909.

### *Some English County and Borough Asylums.*

*Cardiff.*—We congratulate Dr. Goodall on his new asylum, which appears to have been designed conveniently. No doubt in its ultimate shaping it has improved under his experienced judgment. He is proud and thankful for the fact that over 600 patients were transferred from thirteen asylums by the new and untried staff without hitch or accident. The subjoined remarks made by him are, indeed, true and to the point.

The Institution is equipped much above the average in respect of scientific apparatus for clinical and pathological research. Such equipment is necessary in every hospital for mental diseases if the medical spirit, without which these institutions would rank merely as places of detention, is to be fostered, and young medical men of a desirable stamp are to be attracted. More than ever is it incumbent to have such in a mental hospital in touch with a town possessing medical laboratories and trained workers in all departments of medicine, which provides post-graduate instruction, and which aims at possessing a complete medical school. These facilities offer a golden opportunity for that collaboration of workers in different departments of medicine which is so essential to progress in knowledge and treatment, and which becomes increasingly necessary with the growth of specialisation. I must here express my indebtedness to Dr. Schölberg, of University College, Cardiff, for the very valuable guidance and assistance he has given us in bacteriological work. I would point out that all these considerations respecting medical and nursing work have a bearing on the question of maintenance rate. When we read of this or that asylum having a remarkably low rate of maintenance, we are not therefore to envy that institution forthwith, and to set

LVI.

II



it up as a model to be followed. Before congratulating the authorities we require to be satisfied upon a few points. What, in brief, are their ideals? Is the institution merely a home of rest, where the "patients" are clothed, fed and amused, where the medical service, as on board ship, wholly or mainly consists in a perfunctory round, and attention to the "primæ viæ"; where employees, to whom courtesy accords the designation of "nurse," patrol the wards in the proportion of one to ten or twelve? Are the people whom the asylum serves ready and willing to place their relatives as soon as possible in its care? What is the average duration of residence of those who recover? How many of the patients drift into dementia because they have not, for reasons of want of confidence, been sent in early enough, and because they have received no treatment worthy the name, in order that expenses may be kept down?

*Carmarthen.*—The subjoined directly enforces the arguments put forward in support of superannuation. The Commissioners report:

The staff of attendants and nurses is of sufficient strength, and as regards length of service their record stands high, not more than 13 *per cent.* having served less than a year, while as many as 45 *per cent.* (60 *per cent.* of the men and 30 *per cent.* of the nurses) have served over five years. We fear, however, that the state of things thus disclosed is not entirely satisfactory. Some of the male attendants who have done many years of excellent service have become, by reason of age or infirmity, too feeble to continue to discharge their duties with efficiency, and we are strongly of opinion that the time has arrived when they should be allowed to retire on liberal pensions. This is to be desired, not merely on their behalf, but in the interest of the patients and of the good administration of the Asylum.

Two years ago we remarked on the criticism which the Commissioners found it necessary to apply to the proceedings of the Committee of Visitors. The same condition of affairs appears still to exist, due entirely to dissensions between the authorities in union. The worst thing that can happen to patients and all connected with an asylum is dual control.

*Derby Borough.*—Influenza has been a sore trial in this asylum. One-third of the patients, one-fifth of the male attendants, and more than half of the nurses were attacked. Of the patients twenty-four were males and eighty-five females. The disproportionate incidence between the sexes is contrary to usual experience.

In about 50 *per cent.* of the cases the symptoms were of the gastrointestinal type, and it is remarkable that of the patients who presented these symptoms sixteen (one male and fifteen females) subsequently developed dysentery, from which one woman died, well-marked pathological features of the disease being observed at the autopsy.

The Committee has wisely awarded gold medals to all attendants having more than fifteen years' service. We have sometimes wondered that in asylums there is no mark showing the length of service; such is seen in some other services. A ring on the cuff for every five years served would perhaps tend to make a man a little proud of being able to show that he is not a new-comer.

*Dorsetshire.*—Dr. MacDonald attaches much importance to the full tracing of heredity in a family. He very rightly claims that the sane as well as the insane of a family should be accounted for. That seemed also to be the view of the Statistical Committee, who provided for this purpose the optional Table B 11.

Solaria have been introduced with good effect.

*Lincolnshire, Kesteven.*—In the Commissioners' report we are very glad to see some personal commendation of Dr. Wilson, who, in the absence of Dr. Ewan, accompanied them on their rounds. They speak of the interest and knowledge that he displayed in regard to the patients under his care. A few words of this nature on a subject that is quite as important as the usual points of remark are the proper acknowledgment of a right feeling of responsibility and cannot fail to be useful. It is curious to read, in the *Ætiological Tables*, of influenza exceeding the activity of alcohol in producing insanity. It stands third on the list of agencies when considered as both a principal and contributory factor. We note that Dr. Ewan prints by the side of the table the full table of factors as published by the Association. This has the advantage of showing to the casual reader the factors which do not appear in the year's calculations.

*London City.*—Dr. Steen is able to say that, with an average residence of more than 550, tuberculosis caused no death on the male side and but two on the female side. No doubt the incidence of the disease has been modified by patients showing signs of this disease being kept out of doors in verandahs continuously day and night, winter and summer. A lady unattended came to the door and asked to be admitted. Of course she had to be refused. The extension of the powers, already possessed by institutions for private patients, need most urgently to be extended to those maintained out of the public funds. Now that pensions are out of the way perhaps the Association may be fortunate enough to get some other of its just demands met. This is one of them. Independently of the welfare of such an applicant herself, it must be a matter of considerable responsibility to the medical man who has to make the refusal. He may see signs of impending danger which he cannot legally prevent, and yet he would not be held altogether blameless by the public should an accident occur. Alcohol is by far the most active among the factors. It would be interesting to know whether there is any difference in its incidence on the private and pauper patients.

*Sussex (East), Hellingley.*—Dr. Taylor notes that there is a large increase in the number of general paralytics admitted. They were twelve males and four females in 346 cases. This is a heavy rate indeed for such a pastoral area. As might be expected with its border of sea, Brighton has more than twice this rate.

I would again point out the importance in my opinion of special supervision of the education of children with a family history of insanity, and the necessity of not forcing those who are neurotic and nervously unstable. The mental health of the children should be as important to the State as their physical condition, and should receive as much, if not more, attention. Many cases of insanity that occur in early adult life do not recover, and remain to fill our asylums; it therefore seems to me most necessary to take all possible precautions to avoid a mental breakdown in these young cases. For the obviously feeble-minded the only form of treatment possible is to educate them in special schools where the training imparted is suitable to their mental capacity. It is a much more difficult matter however to advise in the case of the nervously unstable child, the potential lunatic, and the education of these cases requires the greatest care.

We notice that the farm and garden account is drawn up on lines more resembling such an account as a farmer would present for income tax purposes than the usual bald statement. In an agricultural area the profit generally shown must rankle in the minds of farmers who see the latter, and who do not know that it is a mere statement of certain payments in and out, and is not a true profit and loss account. Here the interest (at  $3\frac{1}{2}$  per cent.) on the capital expenditure incurred by the Asylum Committee as tenants is shown. Also rent, rates, and insurances for fire and compensation are detailed, and, further, a sum of £546 is entered as value of the labour given by the patients and their attendants. The estimate of this is made on returns furnished by the bailiff and head gardener. The balance in favour of the farm is brought down to £97, as against many hundreds, if we remember rightly, on the preceding year's working. We like the idea for two reasons: First, it must be more satisfactory to those who are responsible that comparison should be made on a natural basis with the experiences of neighbours. Of course, it may be said that with so good a customer on the spot any farm should do well, but on the other hand, the circumstances of an asylum, the need to work under conditions imposed by responsibilities of the tenant and so on, must hamper the actions and plans of the occupier. Secondly, we think that it serves to bring out the fact that there exists a considerable reserve of man-power in an asylum, if only it can be properly evoked and regulated. Here and there an asylum is shown to make certain products quite remunerative by paying special attention to them. The farm and garden offer an opportunity to all, especially in rural parts. If it can be shown by such accounts that the labour of the inmates has a tangible value, will it not suggest to committees that more profit may follow more expenditure? We know that the readiest means of developing labour by the payment of patients for work done has not commended itself to our Association. But times alter; intensive culture is making its way. This involves a certain amount of minute but simple work, for which, under intelligent supervision, the minds of many patients are particularly adapted. We hear a good deal about the dignity of labour, which is chiefly a matter of obtaining so much an hour. But we believe that there is still some honourable desire for honest labour everywhere, even in the asylum. It does need, however, some proper acknowledgment on the part of those who benefit by it. It seems to be quite a matter to which the Association could well give some serious consideration, and possibly thus remove the reproach that an asylum is, to too great an extent, a home of mischievous idleness and apathy.

*Some English Registered Hospitals.*

*Barnwood House.*—In speaking of the accommodation in his outlying villas Dr. Soutar says something that is quite true, and applicable to detached houses belonging to public asylums, unless these have been erected for special purposes. The designers of schemes providing for an undue amount of segregation sometimes look at the subject from the point of what they themselves would like, rather than from that of

persons who are, by their illness, bereft of many of the mental conditions which suggest separation from the bulk.

We continue to find great difficulty in filling up the accommodation available at these separate houses. Acute cases cannot be treated as efficiently there as in the hospital; to fill them with demented patients would effect no good purpose, and our experience is that those who have passed through their illness to the stage of convalescence generally prefer the full and active life of the hospital to the necessarily less varied interests of these small separate houses. While friends of patients are often greatly attracted by the accommodation offered at North Cottage and the Wilderness, those patients who are capable of deciding generally show a strong preference for residence in the main building.

*Wonford House.*—Some years ago, as we then pointed out, this institution was in dire pecuniary straits. It required much energy to keep itself to the mark of efficiency. A brave fight has been made, and each year prosperity has been more marked. At last the Committee is able to say, with thankfulness, that it is entirely free from outstanding liabilities. It is surely remarkable that when, overborne by long and trying service, Dr. Maury Deas signified his desire to retire, he should have the great satisfaction of being able to say that he leaves the Hospital free of debt, he himself having been, by his strenuous endeavour, the chief agent in bringing about this happy condition. It is very pleasing to note that the Committee have marked their appreciation of his services by voting him a substantial pension.

*York, The Retreat.*—It is curious that this pioneer of right treatment of the insane should still witness a practice which, in these enlightened days, almost amounts to a barbarity. Those patients who decide to exercise their rights under Section 8 of the Lunacy Act are, except in case of illness, compelled to make their appeal at the magistrate's court. One would have thought that the spirit which led one hundred years ago to the abolition of all physical wrong-doing would have secured freedom from moral indignity. We believe that we are right in saying that at Bethlehem, with its many admissions, the visiting of the patient by the justice is the invariable rule. The Commissioners speak strongly on this matter, pointing out the danger of a possible idea of criminality engendering permanent delusion.

The remarkable healing powers that are sometimes shown by even advanced paralytics is well illustrated by a case related by Dr. Bedford Pierce, in which accidental falls resulted in first a fracture of the femur and at some months' interval of the tibia. In both instances union took place in the ordinary course.

#### *Some Scottish District Asylums.*

*Ayr.*—Dr. McRae points out that the question of heredity should not cause undue despondency on the part of the public, since it is not too much to hope that a better knowledge of how heredity really does act and a more scientific provision of suitable environment will assuredly check its baneful influence. In the proper understanding of several diseases, heredity has, in the past, been a stumbling block, the removal of which in the light of fuller knowledge has proved of immense benefit to suffering humanity.



We note among forms of mental disease in the admissions that under both mania and melancholia there is a subclass, "delusional." Ten out of fifty-three cases of mania are thus denoted, and one among forty melancholiacs. It is inconceivable that among so many of the latter there should be delusion in one only. On the other hand, it seems difficult to think that delusion should in any case of melancholia be so dominant a characteristic as to justify its being marked off from all others. We prefer the Association's method of classing all delusional cases together.

*Aberdeen, Kingseat.*—The remarks made before concerning the absence of provision for the voluntary admission of patients into rate-paid asylums in England apply to Scotland. Two men walked out from Aberdeen and requested admission; one of them contemplated suicide and the other suffered from epilepsy. The friends were communicated with, and they were subsequently admitted under the usual provisions. The former distinctly raises the question of the medical superintendent's responsibility for the safety of a suicidal man, aggrieved probably by a refusal of instant help.

There is no special form of insanity attributable to influenza. One of our cases was admitted in a condition resembling delirium tremens, and recovered his mental balance in forty-eight hours. It is better for a predisposed person to have his insanity during his influenzal attack than after it, as there is probably no disease which possesses a convalescent stage so unresistive to serious mental affections. We have several incurable cases in the institution, due to the insidious onset of insanity—particularly melancholia—during the convalescent period of influenza. A printed card with detailed questions regarding the personal and family history was forwarded to the relatives of every patient admitted during the year, and it was returned in every instance more or less fully answered. I find the adoption of this system extremely useful in many ways, and it is appreciated by the relatives of the patients.

*Lanark.*—On the estate there are fifty cottages for the nursing staff and artisans. The Commissioner attributes to this fact much of the stability of the staff. In addition to a bonus for obtaining the Association's certificate, attendants are allowed extra holiday in lieu of the time spent in studying.

In connection with epilepsy Dr. Neil writes:

We are fortunate in having a most complete and conscientious record by the charge attendants in the various wards of all epileptic seizures for years back. It would be of interest to go into many cases, noting their gradual increase or decrease in the number of attacks, and their change of type from *petit mal* to *grand mal* or to mixed type.

As a case in point, we have a male patient who, to those seeing him daily, appears to have little changed in bodily or mental condition since admission in 1902, yet he had 100 fits during his first twelve months, and 240 during his last twelve months here, showing that the cerebral (?) deterioration is much in advance of the mental or physical.

The microscopic examination of the blood of epileptics is a fascinating field, but one full of disappointments and contradictions. After paying considerable attention to this branch, one is forced to conclude that pure epilepsy (so-called) is not accompanied by any change in the number or character of the white blood-corpuscles or of any other of the blood elements.

We cannot, however, get past certain cases where there is a definite leucocytosis corresponding to each increase in the number of seizures. This is usually accom-



panied by an increase in the number of eosinophiles. These conditions may be due to some extraneous factor (perhaps that which causes the mental symptoms), but it is tempting to include a toxic type in our classification of epilepsy.

Auto-intoxication from constipation is without doubt an exciting factor; this is demonstrated by the marked improvement in many cases immediately on admission to asylum régime. Oral sepsis is also an enemy that requires much more fighting, and one which is exceedingly difficult to combat in the mentally deficient, where reactions are sluggish and the patient is indifferent as to the condition of his teeth.

*Roxburgh District, Melrose.*—Dr. Carlyle Johnstone relates a most interesting criminal case with which he had much to do. An imbecile lad attempted to rape his mother, who had herself been in the asylum three times. He was sent to the asylum by the Procurator-Fiscal. He stayed there for five years, and was then removed with the consent of the authorities and placed with a farmer. He earned a little money for the next ten years as a labourer, and then made another criminal assault on a girl. He was returned to the asylum by the Fiscal. It was then discovered that his settlement was in England, and he was sent to the English union with a view to being placed in the Morpeth Asylum. But the Union Medical Officer refused to certify him. So back he came to Melrose. The Scottish parish authorities would not consent to remain liable for a life-long lunacy for which they were not responsible, and made a stir, with the result that the man was taken to Edinburgh to be placed on his trial for the last offence. Dr. Johnstone and others gave evidence that after repeated examinations they were of opinion that the man was a congenital imbecile and unfit to plead. Notwithstanding this he was put on his trial and actually put into the witness box, and asked a few simple questions. The jury found that at the time of the trial he was sane, that he committed the offence, that he was sane at the time of committing it, and he got twelve months imprisonment. One wonders who had the courage to propose that such a man with such a history should be allowed to submit himself to any examination at all. Practically the examination must have been an inquisition.

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## Part IV.—Notes and News.

### THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

#### ADJOURNED ANNUAL MEETING.

THE ANNUAL MEETING, adjourned from July, 1909, was held at the rooms of the Medical Society of London, Chandos Street, W., on Tuesday, 23rd November, 1909, Prof. Bevan-Lewis, President, in the chair.

Members present—See list of attendance at Quarterly Meeting.

The PRESIDENT said the meeting now being held was the annual one, as members would remember that the Annual Meeting in the summer was adjourned to this date because the provisions of the nursing examinations were not then

ready for discussion. They had since been circulated to each member of the Association and opinions could now be expressed upon them. It was necessary that those regulations should come into force on November 30th, so that all the teaching centres should be able to have their course of training in accord with the regulations. He proposed taking the regulations *seriatim*, not having each item read, but taking the clauses by numbers.

No. 1 and No. 2 were agreed to.

Dr. URQUHART asked for some explanation of Clause 3, page 1. The first final examination under the new regulations was to be held on the second Monday in November, 1911, and he wished to ask whether that examination included the old regulation nurses coming up then for the single examination for the first time.

The PRESIDENT said he took it that the single examination would be held in November, 1911; but after 1911 all candidates who presented themselves would not be able to escape the dual examination.

Dr. MERCIER said that was not the intention of the rule. It was that after May, 1911, no candidates would be able to present themselves under the old rule.

Dr. URQUHART: So no single examination is to be held in November, 1911?

The PRESIDENT: No.

Clauses 4 to 14 inclusive were passed.

Dr. STODDART, speaking on Clause 15, said he spoke merely to have things in order. This Clause stated: "Every candidate for the final examination must obtain from the Registrar a schedule, which must be filled up and signed as required, and returned, with the voucher of having passed the preliminary examination, to the Registrar at least four weeks before the final examination." The Association would not require this voucher from nurses exempt under Regulation 6, who possessed a certificate of having trained in a general hospital.

Dr. MERCIER replied that that was an oversight in drafting, and could be remedied by inserting after "Every candidate" the words "except as provided in Regulation 6." He moved that alteration.

Dr. STODDART seconded, and it was carried.

Clause 16 and Clause 17, Section *d*, were agreed to.

Dr. URQUHART, on 17*b*, said the first examination was to be held on the first Monday in May, the first Monday of November; and, in *c*, the final examination on the second Monday in May and second Monday in November. He asked why the preliminary and final examinations were fixed for different days. That meant an unnecessary attendance in the examination room, and unnecessary travelling and waste of time for the examiners.

Dr. PERCY SMITH said that he supposed it was quite impossible for all the attendants in asylums to be examined on the same day; there were a large number of candidates for the Preliminary and for the Final.

Dr. MERCIER said he thought Dr. Urquhart was under a little misapprehension. It was the written portion alone which was to be held on those separate dates, and that did not require the attendance of the coadjutor, so that there was no question of travelling twice over. The reason given for the second day was as stated by Dr. Percy Smith; it would abstract too many attendants from their duties to have it on the same day.

Clause 17*b* was agreed to.

Dr. STEEN moved, in regard to Clause 17*d*, that the practical part be ten minutes instead of fifteen. The oral, he thought, should be decreased to five minutes. If there were twenty candidates, that would occupy six and a half hours, and that makes the examination a very long one.

The PRESIDENT: Had we so many candidates at one time?

Dr. STEEN: Yes.

Dr. THOMSON said the question of ten minutes against fifteen was discussed by the Educational Committee, and it was pointed out that in the practical part in the wards candidates were set to do things which they might be doing simultaneously under the examiner's eyes. That suggestion was considered, and it was thought that in order to be thorough it would take fifteen minutes when one considered the making of beds and the taking of temperatures, etc.

The clause was agreed to as it originally stood.

Dr. DAWSON, speaking on Clause 17*e*, said he supposed those provisions supplemented each other to some extent, but it was right that the practical portion

should be passed in separately. The oral and the papers of questions were of much the same character; and he did not see any reason for the oral if it was not allowed to supplement the papers to some extent. If the examiner were allowed to put the + mark after a paper which was exceptionally good, or a - if it meant the paper was not quite so good as it should be, that could be taken account of in the final award. Many of the candidates were not able to express themselves very well on paper, whereas they might do very well in the oral and show sound knowledge of the work.

Dr. MERCIER said he thought he could satisfy Dr. Dawson. There was before the Educational Committee a scheme of instruction to examiners, in which was included the proviso that where a candidate's work was marked excellent in his oral and practical examination that was to count three marks on the written. That would help a very large number of candidates. There were many who just failed to pass the written who got perhaps 47, 48, or 49 *per cent.*, and if the value of the oral were allowed to supplement the written in that way many candidates would be helped.

Dr. DAWSON: That is quite satisfactory.

Dr. THOMSON: If that is so, should not *e* be re-drafted?

The PRESIDENT said he did not think it required re-drafting.

The clause was agreed to.

Sub-clauses *f* to *m* were also agreed to.

#### CLAUSES 18, 19, 20, 21.

Dr. MILLER read several letters which he had received on the subject:

He added that they were not the only letters which he had received on the subject, but they were the only ones which he had received permission from the writers to make public. There were letters in his possession against the provision as to passing with distinction, and the writers in each case raised strong objections against the inclusion of the clause.

Dr. SPENCE said that if a full discussion were allowed on those letters they would not be able to finish that afternoon.

The PRESIDENT asked Dr. Miller to say what were the chief contentions of the writers of the letters.

Dr. MILLER replied that they were strongly opposed to the provision regarding passing the examination with distinction.

Dr. MERCIER asked if any reason was given for objecting to the distinction.

Dr. MILLER said no reason was given in the letters, except that the writers foresaw some upsetting among the members of their staffs. One writer said—and Dr. Miller thought with truth—that unless separate examinations were held the special distinction was unnecessary.

Dr. MERCIER said perhaps he could remove the fears of those who had sent those letters if he said, as an examiner, that the number of persons who would obtain that distinction would be very small. It required at least 70 *per cent.* of the maximum marks in both examinations to get it. The number of candidates who reached 70 *per cent.* was microscopically small. There would be no chance of a number of junior nurses flaunting before the others the fact that they had passed the examination better than their colleagues. He did not think more than two or three would get it in any year, and it would be a very rare and valuable distinction.

Dr. DIXON asked whether in this matter the distinction to the nurse would be on her recognised capabilities of dealing with patients, or would it be on the marks she would get at the examination?

The PRESIDENT replied that it would depend on her marks altogether.

Dr. PERCY SMITH asked whether there was before the meeting any amendment to that clause.

The PRESIDENT replied that apparently there was not.

Dr. LONGWORTH said the first letter which Dr. Miller read was one in which he and his chief contended that there were reasons against granting a certificate of distinction. They thought it would create a good deal of invidious distinction which would not be justified by the merits of the prospective holders of those

certificates. Their experience of ten or twelve years in training nurses at the Suffolk Asylum for the certificate was such that they had frequently come across members of the staff who had passed the examination only with the utmost difficulty, but were otherwise excellent nurses; they had shown capabilities which could not be estimated by means of examination; and on those grounds they thought the granting of the mere pass would be preferable. He moved that the certificate of distinction proposal be not received. This meant a motion that Clause 20 be omitted.

Dr. MORRISON seconded the amendment. He thought it would create unnecessary difficulties, without any real accompanying superiority.

Dr. MACDONALD said he was sure there was no superintendent and no medical officer who did not wish to encourage work on the part of any member of the staff. Looking at the question from a practical point of view, he thought it was a mistake to go about it in the way now proposed. If it was wished to grant a special distinction, it should be by a separate examination, and he wished that had been the amendment. He was sure it was not the wish of the mover of the amendment that it should be regarded as deprecating better, higher, and more meritorious work on the part of any member of the staff. He cordially supported the suggestion that the provision should not be passed in its present form, and he hoped the meeting would take that view.

Dr. THOMAS DONELAN said he thought that what Dr. Macdonald had said would certainly meet the case. The class of nurses and attendants in private asylums was different from the class of those in public ones. Some of the latter were recruited from the ranks of ordinary domestic servants. If there were a special examination for the former, and a special merit standard, it would meet the case completely. The same applied to male attendants, for in country asylums they came largely from among farm hands.

Dr. STEEN said he hoped the Association would approve of the clause providing for distinction. In every examination there was an "honours" and a "pass," and he did not see why nurses should be deprived of the opportunity of taking "honours." He had not heard any argument up to the present which was convincing, and he hoped the Association would pass the clause.

Dr. DIXON said he understood that the certificate was given for efficiency in mental nursing. If certain candidates proved their efficiency by examination and showed they could reach a very high standard, there ought to be some recognition of that high standard. At the same time he doubted whether high efficiency in mental nursing could be gauged by an examination. That was really the question.

Dr. BEDFORD PIERCE said he had heard that the possession of the distinction certificate might cause jealousy among the staff. At the "Retreat" they had for several years had a method of distinction in operation. The "Retreat" examination had been on a higher plane than that of the Medico-Psychological Association, and those who passed it well received a special medal. He was not aware that any unpleasantness had ensued among the staff on that account; the nurses generally had been proud that a colleague had been sufficiently well up to receive the honour.

The PRESIDENT said he was in accord with what Dr. Bedford Pierce had said. He was himself connected with a large county asylum, and could confirm the statement that the nurses and attendants were drawn from a comparatively uneducated class. That seemed the basis of the objection to Clause 20. But at the same time, the Association must be progressive, and he was fully of opinion that the trend of the clause was towards progress, and therefore should be adopted.

The amendment was put, and declared lost.

Clauses 21, 22, 23, 24, 25, 26, 27, 28, and 29 were passed.

Dr. STODDART said, in regard to Clause 30, he would like to move an amendment. As Secretary of the Educational Committee he would not have moved an amendment to those regulations, but Dr. Mercier gave him to understand he would be in order in doing so. His own feeling was that the fee of 10s. for the second examination was too high for nurses coming from the class from which nurses were drawn, because many of them already found that even the 5s. fee was rather a strain upon them; and many hesitated about paying the 5s. fee to go in for the examination at present. If the fee were 5s. for the first examination, and



5s. for the second, that would add to the Association's income a sum of £250. If the second examination fee were raised to 10s., that would increase the income of the Association by another £250, the total increase being £500 a year. As far as he was aware—the treasurer would be able to correct him if he was wrong—the Association did not need that money, which would be lying idle; and it was not fair to the nurses to charge them so heavily. Another point to be considered was that a general hospital nurse got her training, examination and certificate free, without any fees whatever, and those general hospital nurses, who often came from a class who could afford to pay very much better than the asylum nurses, entered into competition with asylum nurses, and hence mental nurses were placed at a disadvantage. He therefore moved that instead of the words "and for the final examination 10s.," the rule should read, "and for the final examination 5s.," and so forth.

Dr. PERCY SMITH asked whether it was not the fact that people who entered as probationers at general hospitals usually paid something to the hospital on entering to be trained. If so, they did invest some money. And the 10s. in the present case was an investment for the nurses with regard to that examination. The nurse who obtained the certificate got her name on one of the nursing associations as a private nurse, and was able to earn £100 or £150 a year. Therefore, although 10s. might seem a large amount for some of the nurses who were at county asylums, he thought they did receive considerable value for their investment when they took the certificate.

Dr. SPENCE said it might seem unkind not to support the generous intentions of Dr. Stoddart, but in the majority of county asylums, directly a nurse passed that examination she received an additional £2 a year; and it was surely worth her while paying 10s. to get that. But, apart from that, he thought the Association should make the certificate not only worth having, but worth paying for, and worth working for. He therefore strongly supported the retention of that paragraph.

Dr. MERCIER said, with regard to the financial position, he understood Dr. Stoddart to say the Association was so wealthy that it did not require the larger fee from the nurses. The financial position of the Association, favourable as he was glad to say it was, was due entirely to the dreadful system of sweating the examiners which was carried on. The examiners, at the recent nurses' examinations, assessed with the greatest care 10,000 questions at one-third of a farthing per question.

Dr. WOLSELEY-LEWIS seconded Dr. Stoddart's amendment. He said he hoped the day was not far distant when those examinations would become compulsory in all the public asylums, and that when superintendents would engage nurses it would be understood they would be obliged to pass at all events a preliminary examination before being regularly taken on the staff. That meant to say that nurses in asylums were put on all fours with nurses in ordinary hospitals, who had to go through a course of training before they could be considered nurses.

Dr. MERCIER: Pay a premium?

Dr. WOLSELEY-LEWIS said he meant they would be paid at a considerably lower scale as probationers than when they claimed the full position of recognised nurses in an institution.

The PRESIDENT said that when the clause presented itself to him at first he was rather astonished; he thought 10s. was rather high, especially for the class of nurses in county asylums. But he found that his feeling was not shared generally, and when he looked into the question he confessed he had been converted. The nurses had three years' extremely good training, which was very valuable to them. They had the examinations, and an enormous amount of trouble was taken with their tuition, and the extra 5s. was not too much to ask. He was now very strongly in favour of it, and he looked upon himself as a convert to the clause itself. But he thought good would come out of the discussion. Many nurses received an addition to their wages when they obtained their certificate. Another point he wished to indicate was that during the three years of training the wages of the nurses were going up, and they were therefore better able to pay the sum.

Dr. MERCIER: What is the amendment?

The PRESIDENT: That it be reduced to 5s. for the second examination.

There voted in favour of the amendment 19; against, 23, and—



The PRESIDENT declared the amendment lost, and said that the Association would now proceed to the discussion of the schedules.

Forms A and B were agreed to.

Dr. MERCIER said a little discretion might be allowed with regard to those forms. The number was placed in a different position from that on the present certificates; and it might be convenient to leave it where it is.

Agreed.

The Preliminary Examination portion was likewise agreed to.

The PRESIDENT asked whether there were any comments upon the Final Examination portion.

Agreed.

### THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE Quarterly General Meeting of members of the Association was held in the rooms of the Medical Society of London, on Tuesday, 23rd November, 1909, Prof. Bevan-Lewis, President, in the Chair.

Present—The President, and Drs. S. Adair, H. F. S. Aveline, J. L. Baskin, Fletcher Beach, C. Hubert Bond, David Bower, J. F. Briscoe, P. E. Campbell, J. Chambers, L. Coupland, M. Craig, W. R. Dawson, A. De Steiger, H. Devine, J. F. Dixon, T. J. O'C. Donelan, E. L. Dove, T. Drapes, F. H. Edwards, F. M. Elkins, C. H. Fennell, S. J. Gilfillan, T. D. Greenlees, H. E. Haynes, C. R. Hitchcock, David Hunter, J. H. Johnston, W. B. Keith, H. Kerr, H. A. Layton, S. G. Longworth, J. R. Low, W. H. C. Macartney, P. W. MacDonald, T. W. McDowall, M. E. Martin, C. Mercier, J. Middlemass, A. Miller, C. S. Morrison, H. Hayes Newington, H. J. Norman, F. O'Mara, D. Orr, M. E. Paul, Bedford Pierce, E. Powell, N. Raw, H. Rayner, R. G. Rows, G. H. Savage, J. G. P. Shera, G. E. Shuttleworth, J. G. Smith, R. Percy Smith, J. B. Spence, T. E. K. Stansfield, R. H. Steen, R. C. Steward, A. H. B. Stoddart, D. J. Thomson, T. Seymour Tuke, P. M. Turnbull, A. R. Urquhart, F. Watson, G. B. Whitcombe, G. Williamson, H. Wolseley-Lewis, and T. Outram Wood. Visitor: Staff-Surgeon R. St. G. S. Bond, R.N.

Attendance at previous Council meeting—The President, and Drs. H. F. S. Aveline, T. S. Adair, C. Hubert Bond, W. R. Dawson, C. H. Fennell, P. W. MacDonald, C. Mercier, A. Miller, D. Orr, R. H. Steen, A. H. B. Stoddart, W. Vincent, and H. Wolseley-Lewis.

The PRESIDENT said that before proceeding to the agenda of the ordinary meeting he felt impelled to deal with a subject which at all events ought to be uppermost in the minds of members. They met there that day at quite an eventful epoch in the history of the Association, and it was fitting that they should congratulate each other upon the passage through the House of Lords of the Asylum Officers' Superannuation Bill. (Applause.) Their very hearty congratulations were also due to the Executives of both the Asylum Workers' Association and the Medico-Psychological Association, which had so happily joined hands together and brought about a piece of work which was very important and of mutual benefit. After years of futile labour on the part of the Association the important measure had won success—that success which it so richly deserved. And he thought all would agree that the magnificent headway which it had made throughout its career through both Houses of Parliament was of sufficiently happy augury for its eventual triumph, and of the very beneficent future which was in store for it. Their first duty that day was to convey to Sir William Collins and to Dr. Shuttleworth their keen sense of appreciation of the ceaseless efforts which those gentlemen had made to secure success to the Bill, and their unbounded admiration of the skill, tact and discretion, and address which had been displayed by Sir William Collins in carrying the measure forward, and in guiding the Bill through the troublous waters of the Scylla and Charybdis of parliamentary procedure. He felt bound to say that the intrinsic merits of the Bill seemed from the first to have demanded for it universal recognition and confidence; and that could only be due to the fact that such extreme care had been taken in modelling and

setting out its provisions. Among its chief merits were the contributory clauses, which clauses fixed the Bill on a financial basis, and at the same time encouraged so much that feeling of self-dependence which was the all-important moral element in the measure. It was very important in every sense, and at the same time swept away, once for all, that most undesirable undercurrent of suspicion and distrust which was such a demoralising feature in all non-contributory and permissive schemes of superannuation. He did not think it was necessary for him to dilate further upon the merits of the Bill; they were so manifest to all. He asked the meeting to signalise, with no uncertain voice, its very high appreciation of the work done for the Association by Dr. Shuttleworth (much applause), for he had borne practically the whole of the labour upon his shoulders, and had exerted himself to an enormous extent in the interests of asylums throughout England at large. (Loud applause.) It had been proposed that a more substantial recognition of Dr. Shuttleworth's services should be made by the Association. He was looking forward to a dinner to which Sir William Collins and all concerned would be invited. He felt it was fully in accord with the ideas of members that that should be done.

Dr. SHUTTLEWORTH desired to say a word of recognition of the extreme kindness with which the Association had recognised any little service he had been able to render in a course which was an important one, and in which the Asylum Workers' Association had done its share. It must not be forgotten that the idea of pensions originated with the Medico-Psychological Association and the question was very ably worked at by the Treasurer, Dr. Hayes Newington, many years ago. It had been their good fortune to secure an exceptional year in order to get the measure through as a private member's Bill. And it was to Sir William Collins having taken advantage of the opportunities which had presented themselves that the success of the Bill up to the present point was due. At the same time, one should not lose sight of the very valuable services which Lord Monk Bretton had accorded to the promoters in taking over the personal conduct of the Bill in the House of Lords, and of the public debate which took place in that Chamber. There was also much private debate, which was not recorded in the Press, and negotiation with Government departments. But all through there had been abundance of debate on the measure, and Lord Monk Bretton had been most skilful and tactful in guiding the Bill through with a minimum of mutilation. And though the Bill did not now comprise all that his friends desired, it yet contained a very fair instalment. And if at a future time it was found that the Bill did not work as satisfactorily as was wished, he hoped there might be an opportunity for amendment with the view of getting a little more. He personally very highly appreciated the expressions which had been uttered concerning his own efforts. It had, of course, not been an easy task, and it had taken up a good deal of time; but what he had done had been freely rendered. He looked back upon what he had been able to accomplish with very great satisfaction.

Dr. SPENCE suggested that the thanks of the Association to Sir William Collins should be emphasised by the passing of a special resolution directing the General Secretary to forward to Sir William a formal letter expressive of the Association's warmest thanks for his skilful pilotage of the Bill.

Dr. HAYES NEWINGTON thought that a formal letter should also be sent to Lord Monk Bretton and Dr. Shuttleworth, and on the motion of Dr. MERCIER it was agreed that a resolution to this effect should be entered in the minutes.

#### SIR JAMES MOODY'S KNIGHTHOOD.

The PRESIDENT said he thought it right he should bring another matter before the meeting. Since the Association last met a great distinction had been conferred upon a member of the Association—an old official in asylum life. His Majesty had bestowed a knighthood upon Sir James Moody, and it was only right to ask the General Secretary to write a letter of congratulation, including therein Lady Moody. He asked Dr. Thomson to speak to the proposal.

Dr. THOMSON said that, as Dr. Moody's first assistant medical officer of twenty-three years ago, he had much pleasure in seconding the resolution of congratulation which it was proposed to send to Sir James and Lady Moody.

The resolution was agreed to.

## ELECTION OF CANDIDATES FOR MEMBERSHIP.

Dr. BOND (Secretary) mentioned that in respect of one of the candidates, Cecil Johnson, the proposers were Dr. Shuttleworth, Dr. Crookshank, and himself. But on looking at the register he was reminded that Dr. Crookshank had recently resigned, and therefore his name should not appear there. Dr. Hayes Newington was willing to fill the gap, and, with the permission of the meeting, he took it that the election might go forward.

Agreed.

The PRESIDENT nominated Dr. Thomson and Dr. Steen as scrutineers.

The following candidates were duly elected ordinary members:

George Henry Adam, M.R.C.S., L.R.C.P.Lond. (Manager and Medical Superintendent), West Malling Place, Kent. Proposed by T. Claye Shaw, Henry Rayner, and Hayes Newington.

Gilbert Kennedy Aubrey, L.M. & S., S.A., Assistant Medical Officer, Darenth Asylum, near Dartford. Proposed by A. Rotherham, H. Hallet, and R. H. Steen.

Percival Charles Coombes, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Surrey County Asylum, Netherne. Proposed by F. C. Gayton, J. E. Barton, and H. N. Cappe.

Frederick Douglas Crosthwaite, M.B., Ch.B.Edin., Assistant Medical Officer, London County Asylum, Horton, Epsom. Proposed by John R. Lord, David Ogilvy, and Samuel Elgee.

Rae Gibson, M.B., Ch.B.Edin., M.R.C.P., Assistant Physician, Royal Asylum, Morningside, Edinburgh. Proposed by Geo. M. Robertson, R. Dods Brown, and W. Ford Robertson.

Cecil Johnson, M.B., Ch.B.Vict., 6, Palewell Park, East Sheen. Proposed by G. E. Shuttleworth, H. Hayes Newington, and C. Hubert Bond.

Roger Aiken Rankine, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, Earlswood Asylum, Redhill. Proposed by Charles Caldecott, H. Hayes Newington, C. Hubert Bond.

Dr. SIDNEY COUPLAND, F.R.C.P., then read a paper entitled "The Causes of Insanity, with special Reference to the Correlation of Assigned Factors: A Study of the Returns for 1907" (see p. 1).

The paper was well illustrated by admirably clear statistical diagrams. It was followed by a lengthy discussion, in which the PRESIDENT, and Drs. MERCIER, HAYES NEWINGTON, and BOND took part. Dr. COUPLAND replied.

Drs. DAVID ORR and R. G. ROWS then read a paper (supplemented by a lantern demonstration) upon "The Histological Evidence that Toxins reach the Spinal Cord *via* the Spinal Roots, with Special Reference to Plasma Cells" (see page 86).

The PRESIDENT and Dr. SCOTT WILLIAMSON discussed the paper, and their remarks were replied to by Dr. ORR.

Owing to the lateness of the hour, Dr. Harvey Baird's paper, "Alterations in the Ependyma in General Paralysis"; "A Case of Mania relapsing into Unconsciousness, lasting Seven Months," communicated by Dr. Nathan Raw; and Dr. Scott Williamson's paper, entitled "Typhoid Carrier Infection," were adjourned.

About thirty of the members afterwards dined together at the Café Monico.

## COMMEMORATIVE DINNER.

In celebration of the passing of the Asylums Officers' Superannuation Act, members of the Association and guests dined at the Gaiety Restaurant, Strand, on Monday evening, December 20th, 1909, the President of the Association, Prof. W. Bevan-Lewis, M.Sc. in the Chair.

The guests included: The Right Hon. Lord Monk Bretton; Sir William Collins, M.P.; Dr. Shuttleworth; Mr. J. M. Henderson, M.P., Chairman of the Select Committee of the House of Commons to which the Bill was referred; Mr. R. Charlton Palmer, Lord Chancellor's Visitor in Lunacy; Dr. F. Needham,

Dr. E. Marriott Cooke, Mr. A. H. Trevor, Mr. Fraser Macleod, K.C., Commissioners in Lunacy; Sir George O'Farrell, Inspector in Lunacy for Ireland; Mr. J. B. W. Wilson, Mr. W. Morgans, The Rev. H. Whittaker, M.D., of the Asylum Workers' Association; Mr. H. F. Keene (Clerk of Asylums Committee), Mr. R. H. Curtis, Mr. W. C. Clifford Smith, Mr. Valentine Browne, of the staff of the London County Council; Mr. M. L. Waller, from the Home Office; Dr. Dawson Williams, Editor, *British Medical Journal*.

Expressions of regret were received from the following: His Grace the Archbishop of Canterbury, the Earl of Halsbury, Viscount Cross, Viscount Hardinge, Lord Ashbourne, Lord Donoughmore, Sir John Jardine, M.P., Sir James Crichton-Browne, Mr. Charles Roberts, M.P., Mr. Helme, M.P., the Scottish Commissioners in Lunacy, Dr. Clouston, and several others.

#### Toasts.

After the customary loyal toasts had been duly honoured, the PRESIDENT proposed: "The Passing of the Superannuation Act and Those who contrived it." He said: My lord, lady, and gentlemen, there can be no more pleasant task than that which has been assigned me to-night, of placing upon record the united testimony of grateful hearts for the great boon conferred upon asylum workers throughout the kingdom when the Asylum Officers' Superannuation Act became inscribed upon the Statute Book. Our minds to-night are wholly centred upon those champions of our cause (hear, hear) who have with such rapid intuition realised the inadequate rewards meted out to a large section of the nursing community throughout the country. I do not know that there is anything which approaches nearer to real genius than this same intuitive realisation of the disabilities of our fellow men, more especially when such realisation is immediately translated into action for the total removal, or amelioration, at all events, of the conditions existing. (Hear, hear.) But when this native genius is coupled with those noble moral sentiments of disinterestedness, an unselfish devotion to the best interests of a worthy cause, a keen sense of justice, and unflinching tenacity of purpose, we not only admire, but we begin to revere—nay, to worship—the lofty altruism of our fellow man. I do not think that there is, among the sad visitations entailed by natural forces, any more touching sight than that of a once gallant barque, rudderless, with splintered masts and creaking timbers, driven by the gale helplessly and relentlessly to its certain doom. And surely, gentlemen, in the realms of consciousness and of conscious activity, there is no more pathetic sight than that of the rudderless mind, tossed hither and thither by the storms of conflicting passions and emotions, bereft of the one and only light—that of reason—which Nature has bequeathed it whereby to pierce the gloom of this only too sad life of ours, drifting helplessly to be engulfed in the vast inane, or to be left like the shipwrecked barque, or like the whitened skeleton on the sands of time. Yet this is insanity; such is the chosen sphere of our activities, and all asylum workers, from the topmost to the bottom rung of the ladder, are banded together with one fixed and determined purpose—that of the cure or the amelioration of one of the saddest, one of the most terrible scourges that fall to the lot of man to endure. I know no nobler vocation than that of ministering to the mind diseased, than that which aims at the cultivation of those noblest moral qualities which are so absolutely essential to the making of every good nurse, as of every good physician, tact, self-control, gentleness, self-abnegation, and, far above all these, that wide-reaching sympathy with mental suffering which seems almost to "Spring from the depths of some Divine despair,"—moral qualities of the very highest kind, which themselves have been touched and tried by fire, and which no gold can purchase, and to which no adequate value can be assigned. To you, Dr. Shuttleworth, I turn first (applause) to offer you the heartfelt thanks of every member of this Association. You, sir, with happy genius, were among the very first to recognise the crying needs of the asylum worker; were among the very first to conceive the legislative machinery adequate to their removal. With unshrinking courage and the confidence which the merits of every good cause inspire, your ceaseless efforts were exerted upon their behalf, always keeping in view with clear prophetic vision the happy future you had mapped out for so many of your fellow men. (Hear, hear.) I know, sir, that no words of mine can adequately express to you the sentiments we



would utter; we feel that those pleasures which arise from the gratitude of one's fellows for services rendered such as yours, so nobly and so unselfishly, can in no way compare with those which issue from the *accomplishment* of a noble act, and we would therefore turn to you with our very sincere congratulations at the attainment of your lofty ideal, and at your inward realisation of that eternal law that every good act is its own and its best reward. (Applause.) To you, sir, it must be a source of infinite satisfaction that you have lightened the burden of so many hearts; that you have raised the cloud which obscured their future; and that you have gladdened the eventide of their life with the rays of setting suns. Whilst acknowledging the great services we, as a profession, owe to Sir William Collins in the past (applause) for his ever lively interest in the asylum worker and his environment, for his establishment of that great pathological department at Claybury, from which has emanated such great and brilliant work under the directorship of Dr. Mott (applause), we wish more particularly to-night to emphasise his latest and his greatest services to asylum workers throughout the Kingdom. (Applause.) It is useless building a stately craft unless you have an able crew wherewith to man it, or unless you have a skilful pilot to take it through the narrow waterways or hidden shoals, or unless the wayward winds and currents can be met by clever seamanship. But far more than this has been done for the Superannuation Bill by Sir William Collins, in concert with Lord Monk Bretton (applause), in safely conveying this measure through its perilous career in Parliament. No one who has followed the course and progress of this Bill through both Houses of Parliament, or who is at all familiar with the intricacies of Parliamentary procedure, or who can realise in any way the glare of those great searchlights of publicity which are at once turned on such a measure as this, can for a moment doubt the infinite tact and address, the ceaseless watchfulness, the great resourcefulness, which must be in request by him who takes such a measure to its final and successful issue. But one fact in the history of this Bill, gentlemen, which has given us all extreme gratification, is that of the instantaneous recognition by great statesmen in both Houses of Parliament of the intrinsic merits of the Bill (hear, hear); of the very keen, the intense, the enlightened interest shown by almost all in the welfare of the asylum worker and his surroundings. How very different all this, gentlemen, from what occurred in the early days of the third and fourth decades of the past century, when the eloquent and pathetic appeal on behalf of the hapless lunatic by such statesmen as Lord Shaftesbury and Lord Ashley met with such cool comfort. Is it that the cloud of ignorance and prejudice which so long has brooded over the domain of the insane and their guardians is about to take its final flight before the rising sun of sympathy and enlightenment? Let us at least hope that this is the case. Just as those two Bills which Lord Ashley introduced into the House, and which were made law in 1845, have been called the Magna Charta of the liberties of the insane, so this Act, whose passage we celebrate to-night, might well be cited as the Magna Charta of the liberties of the asylum worker throughout the Kingdom. And just as a great statesman, Lord Shaftesbury, and an eminent physician, Dr. Conolly, were mainly instrumental in emancipating the insane from his centuries of cruel treatment, nay, torture, so now two great physicians, Dr. Shuttleworth and Sir William Collins, in concert with a noble Peer, have been mainly instrumental in emancipating the asylum worker from his dubious position, and establishing the true dignity of his labour, and the recognition of his manhood. (Applause.) It may appear very strange to some that we have departed from the usual course of giving the time-honoured toast of "The Church and The Houses of Parliament," but, on this particular occasion, we felt that the Church and the Legislature have been so happily and so intimately blended with the subject that we celebrate to-night, that we ventured to embrace in one toast one and all who have been instrumental in furthering the good cause. (Applause.) I do not know if his Grace the Archbishop of Canterbury has the slightest realisation of the warmth which he kindled in the breasts of those whose defence he so stoutly maintained. (Applause.) His noble sentiments on behalf of the hapless lunatic and the asylum worker, uttered in the House of Lords when he gave his final benediction to this Bill, still ring in our ears, and are the surest pledge to us of the sanctity and the sweet reasonableness of our claims. To Lord Waldegrave, Lord Hardinge, Lord Ashbourne, and other noble Peers and Commoners, our very hearty acknowledg-



ments are due, for they really stood out as burning and shining lights upon the advancing line of a progressive cause, and they did not fail to link themselves with our cause by the golden and silver threads of a practical and outspoken sympathy. I must not fail to recognise the strenuous efforts of his Majesty's Commissioners in Lunacy (applause), who have at all times, during the last twenty years certainly, publicly avowed their hearty sympathy with the main principles which are now embraced by this Act. Especially do we admire the sturdy support they have always given us in advancing the comfort, the status, and the future welfare and prospects of the asylum worker. Nor, gentlemen, must we fail to acknowledge the efforts of that gallant crew who so very ably manned the legislative barque, the executives of the Asylum Workers' and the Medico-Psychological Associations conjointly. They have stood the heat and burden of the day with remarkable fortitude and in a quiet and unostentatious manner, but at the same time with most wonderful harmony and singleness of purpose. It would be wrong of me not to mention such names as those of Mr. Morgans (hear, hear), Dr. Pasmore, Dr. Robert Jones, Dr. Greenlees, Dr. Harding, Dr. Nicholl, Dr. Carlyle Johnstone, Dr. Urquhart, Dr. Nolan, Dr. Bower, Dr. Wolseley Lewis, Dr. Hubert Bond. (Applause.) But, gentlemen, there is yet one name I fain would utter, for he is one who has associated himself with this question in the years of long ago and up to the present time; and if I could I would mention that name. But my lips are sealed, and by himself. I must leave it for your instincts to divulge to whom I refer. Suffice it to say that I know sufficient of him to be quite well aware that if I were to obtrude his personality here beside that of Dr. Shuttleworth's bright and particular star now in the ascendant my life would not be worth a moment's purchase. (Laughter.) For, gentlemen, the nameless one is muscular, the nameless one is strenuous, and unless any of you wish your President to be sacrificed, as Agag of old was, and hewn to pieces at your feet, you will not press me to name him whom I now refer to, especially on this auspicious occasion, when our happy Christmas bells are about to—

“Ring out the old, ring in the new;

Ring out the false, ring in the true.”

(Cheers.) Gentlemen, my very pleasant task is done, and it is your duty now to honour the toast which I have given you, that of “The Passing of the Superannuation Act and Those who contrived it,” coupled with the names of Sir William Collins, Lord Monk Bretton, and Dr. Shuttleworth. (Cheers.)

Sir WILLIAM COLLINS, M.P., in responding to the toast, said: Professor Bevan-Lewis, my Lord, lady, and gentlemen, it is with no ordinary feelings of mingled gratefulness and diffidence that I rise as the first of the trio who are, by your order, asked to respond to the toast that you, sir, have proposed with such eloquent expressiveness, and with such a delightful and poetic imagery. I feel that the hypercritical might find fault with the order in which that trio of response was arranged. (No, no.) I feel, at any rate, that I ought not to precede the noble Lord who so ably conducted this Bill in which we are all interested—now, happily, an Act—through the Upper House. But I perceive that the order is a historical one, at any rate in the first instance, and that the last, and naturally not the least important, to respond to the toast is the true inspirer of the whole movement, the urger-on of many a stage when the Bill might have been thought to flag, and the true Moltke-like organiser of victory, our friend, Dr. Shuttleworth. It has been my privilege, as you, sir, indicated, during my public life to be associated to some extent with the work which your Medico-Psychological Association has to deal with, both in regard to the science and the service of psychiatry. The small efforts to which you referred in connection with Claybury Asylum, as long ago as the early nineties, are, I think, at any rate an indication that a great democratic body like the London County Council was not anti-scientific, but quite prepared to do what was necessary so as to wipe out the reproach under which psychological medicine then laboured in London, in not having adequate means of pursuing pathological and scientific work in connection with diseases of the mind. And now, instead of being behind, it is in the very forefront of any such research in any part of the civilised world. In regard to the services of psychological medicine, of which this particular Act, whose passing you are so handsomely commemorating this evening, has to do, I recall the fact that the late Sir William Hamilton used to say that in the world there is nothing great but man, and in man there is nothing

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great but mind ; and, as you, sir, fitly quoted, you may well admire both the calling and the devotion of those who seek to minister to the mind diseased. And if that statement of Sir William Hamilton's be true, we can realise the greatness and the importance to the community of the sphere of work to which you have devoted your lives. It requires qualities of both heart and head, and we have only to look back, as you have indicated, to recognise the great work of Tuke, and Conolly, and Pinel in France, to recognise the enormous strides in the humane and scientific treatment of the insane, in which this country has, happily, played such a distinguished part. I had early imprinted upon my mind that picture which Hogarth painted somewhere about 1750, I suppose, showing the condition of the insane in Bethlem in his day, where he exhibits, with the truth of a great artist, the condition of the melancholiac, the general paralytic, and the maniac. I allude to that picture called "The Rake's Progress," that picture in Bethlem which serves to show the horrors, and the neglect and apathy, and indifference, even contempt, with which the insane were treated 150 years ago. I was early led to take some little interest in the work of asylums, and I was deeply impressed by the fact that there was a devotion and a service in connection with the asylums of this country, not only those which are rate-supported, but others, like Earlswood, services which no money can measure and no salary or superannuation can adequately requite. And I learned this, that the service was not only arduous but often repulsive, and not infrequently perilous ; and that if any class of public servants had such a claim upon public recognition as to deserve greater stability, greater honour, and greater ease in the declining years of their service, no others stood out more exceptionally qualified for such public recognition than the workers in our great public asylums. (Applause.) Indeed, as you, sir, in your most eloquent speech indicated, there are two features which are specially striking to anyone who looks in perspective, as it were, at the great work of a public asylum. The work is, on the one hand, most exacting, a strain alike upon body and mind. But besides being most exacting, it is capable of bringing out the most admirable qualities which are possible in humanity ; and I remember, in an address I gave at the Asylum Workers' Association, I recalled the old mediæval painting representing at one and the same time two events—the Transfiguration on the Mount, and the healing of the epileptic at the foot of the Mount, the epileptic gnashing his teeth and pining away in the manner so truly described by the Evangelist. And I cannot help thinking sometimes that this asylum work does bring together both the exacting work of attending to the epileptic and paralytic and those least able to help themselves ; and, by its disinterested service, calls out those higher ideals of human devotion which happily transfigure and transform our lives. (Cheers.) I have sometimes asked myself in public life, If one cannot be the friend of the most pitiable of mankind, can one not at least befriend those who do ? And when I had brought to my knowledge by Dr. Shuttleworth the condition of things in regard to the evening of the days of those who had laboured in asylums, I confess I felt that a real case had been made out for public recognition of the great service to which you gentlemen belong. The salary of such services was not by any means always commensurate with the importance and the disagreeableness of the service which was rendered ; and there was not provision made for old age. And it is good to know in this age, which has a tendency to materialism, that we nevertheless have this redeeming virtue, that we have a growing reverence and regard for old age. And it seems in harmony with the spirit of our statutes at the present time to see that, at any rate, no service such as this should be left unprovided for. These, I take it, were the moving forces which led to the introduction of this Bill. And, if I am not speaking at too great length (No), I should like to allude to one or two incidents which occurred during the passage of this Bill through the House of Commons in its later stages.

After recounting these incidents Sir William Collins added : It will always be a matter of satisfaction to me to have been permitted, at the request of the Asylum Workers' Association and the Medico-Psychological Association, to bear a humble part in the passage of this Asylums Officers' Superannuation Bill. (Cheers.) We may differ, and probably do, around this table upon political matters ; but it is pleasant to me to know that to-night, to the right and left of you, Professor Bevan-Lewis, are representatives of both Houses who have taken their fair share—I am not sure that the Lords have not taken the larger share—in passing this

Act. We may differ in political opinions—man's opinions must ever be liable to error; it is by the motives which sway his heart that he can alone be judged, and the motives of those who introduced this Bill and those who have humbly endeavoured to make it law and have succeeded, have not been low, mean, or sordid motives, but they have been motives animated by the highest desire to do the best, not only to the great service to which you belong, but to the larger number of those who belong to the most pitiable and most helpless class of the community. (Cheers.)

LORD MONK BRETTON: Professor Bevan-Lewis, lady, and gentlemen. I am very much obliged to you, as the Chairman, for the very kind and all too-flattering words which you chose to use about myself in regard to the passing of this Bill. I feel that, so far from being associated with this toast, I really hardly have any right to be here at all. (No, no.) I believe there are some of you here present who have laboured for the principles of this Bill for something like twenty years. I have not borne the burden and heat of the day; I did not come in at the eleventh hour even; I came in at about three minutes to twelve. (Laughter.) I think it was in September that Dr. Hayes Newington introduced me—and I am very much obliged for the introduction—to this Bill. And in the following month Dr. Shuttleworth asked me to chaperone it in their Lordships' House. I can only say I am very proud to have served, even indifferently, in so good a cause. Sometimes one finds oneself engaged in a cause about which one has misgivings; one is not so sure that what one's opponents say has not a great deal in it. That was not the case in reference to this Bill. (Applause.) The asylum worker is engaged in a very noble profession, in a very important profession, and in a very trying profession. And it is a profession with which the public are unacquainted. I suppose, in its lower ranks, it may be compared either with the prison service or with the police. Well, the prison warders are the *protégés* of the Government, and the Government has a large and inexhaustible purse, and can see that these employees have all their requirements. In the police, a service which may be compared with the asylum service in its lower hierarchy, they are under the local authority. But the police, after all, is a favourite of the ratepayer. When the most parsimonious ratepayer wakes up in the morning and sees the policeman outside his front door he does not grudge the rates which are paid to the police. And when, for instance, at this festive season, this policeman asks for a subscription to the Widows and Orphans Fund, that ratepayer gladly contributes. And the Government does something too; the Government contributes money to the police pensions, which, alas, it does not even now to the asylums pensions. I am glad to think that we have done away to a great extent with an injustice by the passage of this Bill; and I trust that by doing so we have conferred a benefit on the asylum service. (Applause.) But I cannot allow this opportunity to pass, with Sir William Collins here, with his great political influence and his great diplomatic ability, without suggesting that he should push these energies even further, and obtain from the Treasury some grant, comparable to that given under the Police Act, for the purposes of the asylums officer. And he might go even further, and on the analogy of the prison warder, allow the asylum service to be, as it has been lately borne in upon my mind it ought to be, a wholly Government institution. (Applause.) But I cannot help feeling that this may be somewhat of a historic occasion; that this may be, perhaps, if Sir William Collins has his way, the last private Bill that will ever pass through their Lordships' House. (Laughter.) It is an epoch in constitutional history, not because there may not be other private Bills, but because there may not be another Lordships' House. (Laughter.) And perhaps when the chronicler jots down the whole of these events he may compare their Lordships' House to a great criminal who has been engaged in a number of crimes, and upon whose death-bed there was just one little flicker of virtue, the consciousness that in his last moments he passed the Asylum Workers' Superannuation Bill. (Laughter.) I know that perhaps everybody is not quite pleased with their Lordships' House. I know that they made amendments, that they even made privileged amendments; they amended the age, they amended the scale of contributions. I might, in their defence, say that there is a very large army in this country, and in every country, of men, women, and children who do not get all they want in this world. I belong to that catholic army myself (laughter), but I will not take hat for my defence. I desire to say



that I think their Lordships' House did extremely well by this Bill. (Applause.) They received it in a very sympathetic spirit. I know that they made amendments with regard to these particular matters, but I must ask you to remember the circumstances. This was a private members' Bill; it was an extremely important measure to be a private members' Bill. It was a Bill in which any legislative assembly must be guided by the attitude of the Government. The Government was an exceedingly taciturn Government. It said absolutely nothing in the House of Commons; it began by being very reserved in the House of Lords, and it was only quite at the end that it began to be loquacious. We had to guess what it wanted; but it did tell us that if we did not do what it wanted the Bill would be wrecked. We did what we thought best; we accepted the amendments which we thought best, and we were told afterwards we had been very wise. There were further amendments, which I may designate the machinery clauses, made by their Lordships' House which will prove valuable in the working of this measure. And so I claim for the House of Lords that when some future Gibbon shall write on the causes of the decline and fall of their Lordships' House, he need not head one of the chapters "Asylum Officers' Superannuation Bill." (Laughter.) I have seen, during the time I had the privilege of being in charge of this Bill, some of the rocks around which the ship had to be steered. From that point of vantage I desire to say that nothing could exceed the diplomatic skill with which Sir William Collins piloted the Bill. (Applause.) But Sir William Collins not only navigated his barque through many rocks, but he also took it a very long journey. I believe this ship started somewhere near the offices of the London County Council, and before it concluded its voyage it had travelled all round England and Wales and Ireland and Scotland. And if you consider, as Sir William Collins has mentioned, that the position of the law in Scotland was very much more retrograde than in England, that there was not even the optional power of giving these pensions in Scotland, and yet if you came to London or Lancashire you found extremely progressive bodies which had already scales in existence, and if you realise that he brought all these different societies into line, you will appreciate the extent of his diplomatic ability and the success with which he applied it to this Bill. (Applause.) The ordeal is past, and the iron has come out of the furnace as moulded steel. And now I do most confidently hope that the effect of this Bill is going to be to raise the profession of the asylum workers all round. (Hear, hear.) I hope it will benefit them in all their classes; and if there be, on the part of any, disappointment as to this or that amendment, I hope when, next April, this Bill comes into force, it will be found that those amendments were not so important as some of us consider them; and that this law is going to be one of real benefit, a statute for the good of the asylum worker. (Cheers.)

Dr. SHUTTLEWORTH, in responding, said: Mr. President, my lord, lady, and gentlemen, I need hardly say that this evening's gathering in commemoration of the passing of the Asylum Officers' Superannuation Act has been most gratifying to me, and I have been much touched by the very kind reference which has been made to my humble share in the matter by our President and the several speakers who followed him. Let me, then, thank you at once for the grateful recognition of such share as it has been my privilege to take in the promotion of this Bill. At the same time I wish you to remember that I was only one out of many who really bore part in the work and heat of the day. It might be invidious, perhaps, where so many did good service, for me to mention names and particularise workers, but I think, acting as I was, at first chiefly in my capacity of Honorary Secretary of the Asylum Workers' Association, I ought not to take to myself all the credit that really belonged to the Committee of the Association, which spent many afternoons, I may say almost many days, in finding out, first of all, the sort of Bill which would be acceptable, and then drafting it into more or less parliamentary shape. There were so many helpers that I could not mention all their names; Scotland was worthily represented before the Select Committee by Drs. Urquhart and Carlyle Johnstone, and Ireland by Dr. Nolan; but I cannot help speaking of one who, not only in drafting the Bill, but in the subsequent career of that Bill through Parliament, and more especially before the Select Committee of the House of Commons, was supremely serviceable to our cause; I mean Mr. Morgans. (Applause.) Also we must not forget that as soon as the Medico-Psychological Association was

satisfied that we were on the right track, that our Bill was such as they would be justified in approving, we had the very cordial and valuable co-operation of this Association; and I may again, perhaps, venture to mention one name—I amount bound over to reticence by any threats of personal violence (laughter)—and that is the name of, shall I say our venerable? at any rate venerated, Treasurer, Dr. Hayes Newington. (Cheers.) He most kindly placed at my service the many investigations he had made in former years, and indeed up to a quite recent date, with regard to the pension privileges of certain public officers and others who were, in some sense or other, analogous to asylum workers in reference to position. And then again, I have had the cordial and ready assistance, and the valuable co-operation of the Secretary of this Association, and of the Chairman and Secretary of its Parliamentary Committee. In fact one may look upon the Bill as ultimately a joint product. There are many names that I should like to mention—some of them the President has already alluded to—but I must not weary you with repetition. I will only say that, having obtained the inestimable services of the President of the Asylum Workers' Association, Sir William Collins, to introduce our Bill into the House of Commons, we found many good friends in both Houses of Parliament. (Hear, hear.) First of all let me mention, in addition to Sir William Collins, our good friend Mr. Charles Roberts, M.P. He it was who first suggested the idea that, as we found after waiting year after year, that no progress had been made with any Government measure for the regulation of lunacy, it would be better for us to venture upon the experiment of getting a private member to introduce the Bill into the House of Commons. We were most happy in our choice, and we have been most happy in the result. And we owe, I think, a debt of gratitude to Mr. Roberts. We have had, also, the cordial help of his Majesty's Commissioners in Lunacy, and, let me say also, of the officers of the London County Council; and I may specially mention the name of Mr. Keene, who has been a very kind and able co-operator in the progress of the Bill. But to our Parliamentary leaders, of course, Lord Monk Bretton and Sir William Collins, we owe immense gratitude, a gratitude most sincerely felt, I am sure, by members of both the Associations—the Association which I more immediately represent, and by this senior body, the Medico-Psychological Association. And the words of appreciation which have fallen from our President will, I am sure, find an echo in thousands—nay, I may say tens of thousands—of grateful hearts in the various asylums scattered throughout the length and breadth of the three Kingdoms. Personally we owe what has been so aptly called the working part of the Bill to the consummate tact and great ability of Sir William Collins and Lord Monk Bretton's unwearying industry and diplomatic treatment of the numerous difficulties which arose in the Upper House. Perhaps his lordship will excuse me if I mention in passing that, if the handling of our Bill may be taken as a fair specimen of the legislative thoroughness of the Peers, there can be no doubt whatever of the effectiveness of even our unreformed Second Chamber (applause); for at every stage of the Bill, from the Second Reading onwards—the Committee stage, the Report stage, and the Third Reading—we had copious sheaves of amendments—I think six or seven pages even at the Third Reading—and these were duly discussed *pro* and *con* on either side; and the merits of the Bill were most thoroughly threshed out in their Lordships' House. Before passing from that subject I must not omit to mention the debt of gratitude we specially owe to, amongst others, the Archbishop of Canterbury in the Upper House. (Applause.) His Grace was good enough, though through the duties of his high office exceedingly occupied with other matters, to throw his heart and soul into our cause. Well, the Bill is through, and we rejoice therein. It is true we have not got all that we asked for, but we have got a very considerable amount towards it, and, above all, the principle of assured pensions on a definite scale has been secured for asylum workers, and the principle of aggregation of service is now an enactment on the Statute Book. At length, and after very long waiting, the State has recognised her duty towards this most useful, most patient, and oftentimes self-sacrificing class of public workers, who will now increasingly feel, I have no doubt, their corresponding duty towards the public in devoting their best years and their best energies to the service of the insane. (Cheers.)



*Telegram to the Lord Chancellor.*

Dr. PERCY SMITH : Mr. President my lord, lady, and gentlemen, our indefatigable Secretary, Dr. Bond, has laid upon me a duty which I think ought not to be neglected. Many important personages have been alluded to in connection with the passing of this Bill; but there is one most important person, so far as lunacy matters are concerned, who has not yet been referred to by name, and that is the Rt. Honourable the Lord Chancellor. All recognise, I think, that if it had not been for the sympathy of the Lord Chancellor in this matter this Bill might have been wrecked; and it is a matter of great satisfaction that his Lordship and the Upper House felt so disposed towards this very important measure. We have been looking, expecting, and hoping that His Lordship would at some time bring forward a very important measure of reform in connection with the lunacy laws. I think that for something like ten years we in England have been hoping that we should at least have the same privileges that exist in Scotland with regard to the treatment of early cases; but apparently this is not to be yet. It has been suggested that a telegram should be sent to the Lord Chancellor, thanking him for the cordial support which he gave to this Bill, and for his assistance in enabling it to become law. The telegram which has been proposed runs: "The Presidents, councils, and members of the Medico-Psychological and Asylum Workers' Associations, assembled at the Gaiety Restaurant to celebrate the passing of the Asylum Officers' Superannuation Act, respectfully convey their profound appreciation and warm thanks for the sympathy and support which your lordship gave to the Bill." (Applause.)

*The Visitors.*

Dr. SAVAGE, in proposing the toast, "The Visitors," said: I need scarcely say, Mr. President, my lord, lady, and gentlemen, that the submission to you of the toast of "The Visitors" affords me very great pleasure. I feel that we are highly honoured in having the support of so many distinguished guests, who have all taken a genuine and deep interest in our work. We have representatives, as you have already heard, of both Houses of the Legislature, and we have the official heads of our own branch of medicine. I would most heartily press upon you our good wishes towards those who have joined us this evening. I take the greatest possible pleasure in coupling with this toast the name of my very old friend, Dr. Needham. (Applause.) He represents not only the Commissioners in Lunacy, but one who has gone through the mill himself, one who has raised one of the registered hospitals to the highest possible pitch of perfection. (Applause.)

Dr. NEEDHAM, in responding to the toast, said: Mr. President, my lord, lady, and gentlemen, I am here to-night with very great pleasure because I consider that the fact which this great meeting celebrates marks an epoch in the history of asylum administration in this country. It is well known, I think, that the Commissioners have always had a very strong feeling that a scheme of assured pensions was the only way out of a very great difficulty in asylum administration. In 1900 we said that "we have no doubt that the asylum services generally can only be maintained at a high, and therefore economical, level by such an advance in salaries and wages as have been made in other branches of highly skilled and responsible work, or by the less costly and more satisfactory plan of deferred pay in the form of assured pensions. The salaries of the superior officers, and indeed of all the staff, are very moderate; their work is anxious and responsible, and frequently repulsive, and under it a not inconsiderable number of persons break down." Those are the views which have been held by the Commissioners for a great number of years; and I think I need not say that the desire of the Commissioners has been all along that an assured system of pensions should be provided. What one has to deprecate so very much, what superintendents of asylums have deprecated so much, have been the frequent changes in the subordinate staffs of asylums as influencing the patients in a very undesirable way, as diminishing very largely their comfort, and diminishing greatly the means of successful treatment of them. And we hope sincerely, and trust and believe, that the passing of this most important Act will give assurance to people who are in the asylum service, which will

enable them to retain their offices very much longer than they have been in the habit of doing. And I have no doubt whatever that this will result in a benefit to the asylum workers throughout the country—a very large class; that it will also result tremendously in the direction of advantage to the insane; because what benefits workers among the insane must enormously benefit the insane. (Applause.) I need hardly repeat that the sympathy of the Commissioners is very warm indeed towards this Act; and I think that I need not give a greater illustration of that than the fact that every Commissioner who is not having his winter holiday, having been in London during August and September, is present here to-night. I greatly appreciate the kind way in which this toast has been proposed and received, and on behalf of the visitors I beg to tender my very hearty thanks. (Applause.)

Dr. HUBERT BOND: At your request, Mr. President, I have to communicate to you, my lord, lady, and gentlemen, a number of regrets which have been received from those who are unable to be with us this evening. But at this late hour I take it that it is not your desire that I read all of them out. I have quite a number here from those who, except for Parliamentary and other duties and the proximity of Christmas, would have been with us to-night.

Letters were read from His Grace the Archbishop of Canterbury, the Earl of Halsbury, Sir James Crichton-Browne, and Dr. Clouston, and a telegram from the Irish Division of the Medico-Psychological Association and the Irish Asylum Officials' Superannuation Committee.

#### *The Chairman.*

Dr. ROBERT JONES: My lord, Dr. Alice Vance, and gentlemen, I have a toast placed in my hands this evening which, though the last, I am sure you will agree is not the least, that of our distinguished President, Professor Bevan-Lewis. (Applause.) So far, only half the term of his office has expired. We know what a brilliant success the annual meeting was at Leeds, and we have heard to-night his most poetic speech upon the whole question of asylum administration and asylum workers, a speech which I know comes from his heart. We are fortunate in our President; that is the theme of this last toast. We have a President who is second to none in scientific attainments (hear, hear), in distinguished administrative ability, second to none in the unstinted and full devotion of his mind and heart to the work of his life. His acts speak for themselves. I know him privately, as many of you do; and you all know his public record. An after-dinner speech is not the occasion for entering into his qualities and his acts, but I may be allowed to refer to one or two. First, the obligation we are under to him for the best standard text-book in the English language on mental diseases; secondly, his researches into the comparative pathology of the cerebral cortex. Our President has been elected by the unanimous voice of our Association to the position which is the highest and most distinguished, and the most cherished of all the positions that any private member of our Association can aspire to. I give you, gentlemen, the health of our distinguished President, Dr. Bevan-Lewis. (Cheers.)

The PRESIDENT: I am extremely obliged to you for the way in which you have received this toast. It is particularly gratifying to myself that it has been proposed by Dr. Robert Jones, whose friendship has always been warmly appreciated by me. I thank him for his sentiments, which are distinctly far above anything I deserve; and I can only rejoice that the accident which makes me your President for this year has placed me in the Chair on an occasion which I regard as one of the most auspicious in the history of the Association. (Applause.)

### SOUTH-EASTERN DIVISION.

#### AUTUMN MEETING.

The Autumn Meeting of the South-Eastern Division was held by the courtesy of Drs. Adams and Johnston at Brooke House, Upper Clapton, N.E., on Wednesday, October 6th, 1909.

Among those present were Drs. J. O. Adams, R. R. Alexander, P. J. Baily, D. Bower, A. N. Boycott, A. W. Daniel, A. C. Dove, F. H. Edwards, F. W.

Edridge-Green, J. G. Gordon-Munn, T. D. Greenlees, H. E. Haynes, J. W. Higginson, G. H. Johnston, G. H. Keene, W. B. Keith, H. Kerr, R. Langdon-Down, Mary E. Martin, A. S. Newington, E. S. Pasmore, G. E. Peachell, G. H. Savage, G. E. Shuttleworth, R. Percy Smith, R. J. Stilwell, F. R. P. Taylor, F. Watson, J. Kennedy-Will, and R. H. Steen (Hon. Sec.).

The House and grounds having been visited, the members were entertained to luncheon. At the termination of the lunch Dr. Bower proposed a vote of thanks to Drs. Adams and Johnston for their kindness in so hospitably receiving the Division.

The meeting of the Divisional Committee was held at 2.15, Drs. Taylor, R. Langdon-Down, Pasmore, Greenlees, Peachell, and the Hon. Secretary being present.

The General Meeting was held at 2.45 p.m., Dr. Adams in the chair.

The minutes of the last meeting having appeared in the JOURNAL were taken as read and confirmed.

The following gentlemen were elected as ordinary members of the Association : John Bain, M.A., M.B., B.Ch.(Glas.), Assistant Medical Officer, Northampton County Asylum.

James Kilian Clarke, M.B., B.Ch., B.A.O. (R.U.I.), House Physician, Bethlem Royal Hospital, London, S.E.

Frederick J. Stuart, M.R.C.S., L.R.C.P., Senior Assistant Medical Officer, Northampton County Asylum.

The invitation of Dr. Percy J. Baily to hold the Spring Meeting (1910) at the London County Asylum, Hanwell, was unanimously accepted with much pleasure.

Dr. Bower gave an account of the progress of the Asylum Officers' Superannuation Bill. Dr. Pasmore and Dr. Shuttleworth also spoke on the same matter.

Dr. F. W. Edridge-Green read a paper on "The Theory of Vision and Colour Perception." The paper was illustrated by numerous coloured lantern slides.

In the discussion which followed Dr. SAVAGE said that he had watched with great interest the progress made by Dr. Edridge-Green in his work on colour vision, even though that work had been discouraged by the authorities at the Board of Trade. Dr. Edridge-Green had produced quite a revolution in the theories of vision. He referred to the remarkable paper by Gladstone on the colour ideas of Homer. He felt very strongly that the Association had reason to be proud of the good work done by Dr. Edridge-Green.

Dr. PASMORE instanced a case of a woman suffering from tumour of the cerebellum pressing on the right occipital lobe. In this case, though the patient could match ordinary colours, she was unable to always name them correctly.

Drs. R. LANGDON-DOWN, A. N. BOYCOTT, and R. H. STEEN also spoke.

Dr. EDRIDGE-GREEN in his reply answered the numerous questions which had been put to him by the various speakers. He stated that he agreed with Gladstone that Homer saw two colours only, namely, red and violet.

Dr. T. DUNCAN GREENLEES read a paper entitled "Lunacy Matters in Cape Colony."

The CHAIRMAN (Dr. Adams) opened the discussion, and expressed his interest in the account given of the lunacy legislation in Cape Colony. This was probably the latest legislation of the kind in the British Empire. He could not help contrasting the present system of certification with the condition of things which existed in the earlier days of Brooke House.

Drs. SHUTTLEWORTH, BOYCOTT, and STEEN also spoke, and Dr. GREENLEES replied.

Nine members dined together in the evening at the Café Monico.

#### SOUTH-WESTERN DIVISION.

The Autumn Meeting of this Division was held, by kind invitation of Dr. Blachford, at the City and County Asylum, Fishponds, Bristol, on Friday, October 22nd, 1909.

The following members were present:—Drs. Ballard, Harvey Baird, Baskin, Bazalgette, Blachford, Cotton, Richard Eager, Glendinning, Kough, Norman

Lavers, MacBryan, Macdonald, Marnan, Morrison, Phillips, Pope, Rorie, J. M. Rutherford, Soutar, Thomas, and the Hon. Divisional Secretary (21).

There was also one visitor.

The chair was taken by Dr. Blachford.

The minutes of the Spring Meeting were read and signed.

The following candidates were elected members of the Association :

Ernest Fryer Ballard, M.B., B.S.(Lond.), Assistant Medical Officer, Somerset and Bath Asylum, Wells. Proposed by Drs. Pope, Shera, and Aveline.

John Robert Parry Phillips, M.R.C.S., L.R.C.P.(Lond.), Assistant Medical Officer, Bristol City Asylum, Fishponds. Proposed by Drs. Blachford, Bazalgette, and Aveline.

Dr. MORRISON then read an exhaustive criticism on the Report of the Royal Commission for the Care of the Feeble-minded.

This was followed by a paper from Dr. BALLARD on "A Case of Aggravated Hysteroid Movements" (this paper will be published in the April number of the Journal).

Dr. POPE made some remarks on the Asylum Officers' Superannuation Bill.

Each of these communications elicited a short discussion.

Dr. NORMAN LAVERS kindly invited the members to meet at Bailbrook House on the occasion of their visit to Bath in the spring—an offer which was cordially accepted. The proceedings terminated with a vote of thanks to Dr. Blachford for his hospitality.

A large number of the members dined together subsequently at St. Stephen's Restaurant, Bristol.

#### NORTHERN AND MIDLAND DIVISION.

The Autumn Meeting of the Northern and Midland Division was held at the kind invitation of Dr. Douglas at the Royal Albert Asylum, Lancaster, on Thursday, October 21st, 1909.

Dr. Douglas presided.

The following fifteen members were present :—Drs. M. A. Archdale, D. M. Cassidy, A. R. Douglas, J. S. Farries, J. W. Geddes, S. A. Gill, C. L. Hopkins, W. Hunter, G. F. May, T. McDowall, J. Merson, B. Pierce, R. G. Rows, C. T. Street, T. S. Adair, and two visitors, Dr. Coupland and Mr. Wearing.

Apologies were received from the Right Honourable the Earl of Lathom, who was prevented by illness; Dr. W. Bevan Lewis, the President of the Association; and many others.

The minutes of the last meeting were read and confirmed.

Dr. Hopkins proposed, and Dr. Geddes seconded, that the same three members, Drs. Hitchcock, T. McDowall, and Bedford Pierce, form the Divisional Committee for the next twelve months. This was unanimously agreed to.

Dr. DOUGLAS then read his paper entitled, "The Care and Training of the Feeble-minded" (this paper will appear in the April number of the JOURNAL).

Some discussion followed, in which Dr. Gill, Dr. McDowall, and Dr. Pierce took part.

Dr. PIERCE referred to the question of heredity, and said one felt one did not know the extent of heredity of sound people. He wished someone would take the matter up and get some accounts of the family history. If this were done, he thought that they would find that the percentage of heredity would be much greater.

Dr. DOUGLAS replied.

Owing to the short time at his disposal, Dr. W. Hunter was unable to read his paper on "Mongolian Idiocy." He showed, however, a series of photographs illustrative of the condition. His conclusions briefly were—That Mongolian Idiocy is not an entity, that the characteristics of the condition can all be paralleled in the foetus, that in short the Mongolian idiot is a grown-up foetus. He also demonstrated some morphological aspects of the Mongolian idiot, suggesting that the orang possibly approaches much nearer the line of human ancestry than does either the gorilla or chimpanzee.



Dr. Rows made some remarks with reference to the brain photos shown by Dr. Hunter.

A very pleasant meeting was brought to a close by an adjournment to the Winmarleigh Hall in the Asylum, where the Right Hon. Lord Muncaster unveiled a Memorial Window in memory of the late Sir John Hibbert.

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#### SCOTTISH DIVISION.

The half-yearly Ordinary Meeting of the Scottish Division of the Medico-Physiological Association was held at Bangour Village, on Friday, 19th November, 1909, Dr. Carlyle Johnstone in the chair.

The following members were present :—Drs. Alexander, Dods Brown, Lewis Bruce, R. B. Campbell, C. G. H. Gostwyck, Hotchkis, Jeffrey, Carlyle Johnstone, Keay, Kerr, T. C. Mackenzie, J. H. MacDonald, Douglas Macrae, K. D. C. Macrae, Richard Steele, and Marr, Divisional Secretary.

Mr. Gibson, Chairman of the Edinburgh Lunacy Board; Mr. Johnston, Vice-Chairman of the Edinburgh District Lunacy Board; Mr. Hippolyte Blanc, and Mr. Kidd, Inspector of Poor, were present.

Letters of apology were intimated from the President, Dr. Bevan-Lewis, Drs. Clouston, Yellowlees, Easterbrook, Reid, Parker, Havelock, Watson, Urquhart, and Turnbull.

Dr. Carlyle Johnstone, on behalf of the Superannuation Allowances Committee, explained that the Superannuation Bill had passed its Third Reading in the House of Lords, and gave the gist of the amendments proposed by the House of Lords. He expressed the hope that in a short time the Bill, as amended, would pass into law.

The following were admitted to membership of the Association:

William Gilfillan, M.B., Ch.B.(Glasg.), Assistant Medical Officer, Woodilee, Lenzie. Proposed by Drs. Marr, Parker, and Baugh.

Charles Armit Masson, M.A., M.B., Ch.B.(Aberd.), Assistant Medical Officer, Inverness District Asylum. Proposed by Drs. Mackenzie, Marr, and Watson.

Alexander Cameron McKillop, M.B., Ch.B.(Edin.), Assistant Medical Officer Inverness District Asylum. Proposed by Drs. Mackenzie, Marr, and Watson.

John Ernest Middlemiss, M.R.C.S.(Eng.), L.R.C.P.(Lond.), Assistant Medical Officer, Gartloch Asylum, Glasgow. Proposed by Drs. Parker, Baugh, and Marr.

Hugh Morton, M.B., Ch.B.(Glasg.), Assistant Physician, Glasgow Royal Asylum, Gartnavel. Proposed by Drs. Oswald, Marshall, and Yellowlees.

Alexander W. Neill, M.B., Ch.B.(Edin.), Assistant Physician, Royal Asylum, Edinburgh. Proposed by Drs. G. M. Robertson, Ford Robertson, and Dods Brown.

Jane I. Robertson, M.B., Ch.B.(Glasg.), Assistant Physician, Royal Asylum, Glasgow. Proposed by Drs. Oswald Marshall and Yellowlees.

Joseph Roderick Sutherland, M.B., Ch.B.(Glasg.), M.R.C.S.Eng., L.R.C.P.(Lond.), Assistant Medical Officer, Woodilee, Lenzie. Proposed by Drs. Marr, Parker, and Baugh.

Arthur L. Taylor, B.Sc., M.B., Ch.B.(Edin.), Assistant Medical Officer, Lanark District Asylum, Hartwood. Proposed by Drs. G. M. Robertson, Kerr, and Dods Brown.

Dr. JOHN KEAY, Medical Superintendent, gave an interesting account of the History and Inception of Bangour Village, and explained the plan of it in detail. Thereafter the members were conducted by Dr. Keay through the several parts of the Institution.

The members were entertained to lunch by the Edinburgh District Lunacy Board.

A vote of thanks to the Edinburgh District Lunacy Board and to Dr. and Mrs. Keay for their hospitality and to Dr. Carlyle Johnstone for his conduct in the chair concluded a most interesting Meeting.



## THE INTERNATIONAL CONGRESS OF PSYCHOLOGY.

The sixth International Congress of Psychology was held at Geneva from August 3rd to August 7th under the presidency of Prof. Flournoy. It was attended by some 500 representatives from the most various countries. Prof. Claparède, the general secretary, is to be congratulated on the excellence of the general arrangements.

To obviate certain inconveniences of former Congresses it was decided that on this occasion the various papers should be printed in advance, in order that the members might be better prepared to take part in the discussions. The subjects, moreover, were limited to certain definite themes—the proceedings being therefore less disconnected than is usually the case. A certain number of individual communications dealing with subjects other than those officially announced were, however, permitted. The majority of the Sections presented features of more or less interest to alienists—and Psychiatry was well represented. Another innovation was the introduction of Esperanto among the officially recognised languages. A somewhat heated discussion upon the merits of the new language took place in the Terminology Section, but the majority of those present were in favour of its recognition.

The Section dealing with "The Psychology of Religion" was presided over by Prof. Höffding, of Copenhagen. The proceedings were interesting—more particularly the delightful contribution of the Abbé Pacheu—but many of the speakers tended to transgress the limits of the psychological aspect and to wander into metaphysics.

A Section was devoted to the consideration of alleged spiritualistic phenomena—the first time that this subject has been treated in a Psychological Congress. The principal event was a paper by Dr. Alrutz (Upsala) upon Morselli's medium Eusapia Paladibus.

The discussion upon "Tropisms" acquired an added interest from the presence of Prof. Loeb (Berkely), who first applied the term to the phenomena of animal life. This question has considerable bearing upon psychology, but the conception has not yet become sufficiently definite for any direct application to be made. The discussion showed a great discrepancy of view among the leading authorities.

Prof. Thauzié's paper upon "The Remote Orientation of Pigeons" contained a critical review of the various theories which have been held to account for this remarkable phenomenon. He considers that memory, sight, and increased attention are altogether inadequate to explain the facts—they can, moreover, be excluded by careful experimentation. The hypothesis of a sixth sense is not very illuminating. Prof. Thauzié reaches no definite conclusion, but he is inclined to think that the phenomenon is most probably due to some kind of electro-magnetic action.

In the Section on "The Subconscious," Prof. Dessoir (Berlin) discussed the general conditions under which an element of consciousness can become dissociated from the personality. Dr. Morton Prince (Boston), who has published numerous well-known works dealing with this subject, pointed out that the term subconscious is employed by different authors in very different senses. He proposed that the word should be altogether discarded, and suggested "co-conscious" as a substitute. Co-conscious implies co-activity—that is to say, the activity of certain elements of consciousness which are independent of the ego-complex. Dr. Prince considers that dormant ideas, *i. e.* ideas which are not at the moment active, have no psychic aspect, and should be regarded merely as physiological brain dispositions.

Various short interesting papers were read in the Experimental Psychology Section—and the perennial question of the "Coenesthesia" was dealt with by Mm. Sollier (Paris), Külpe (Würzburg), and Leroy (Paris).

The next Congress of Psychology will be held in America in 1913, under the presidency of Prof. William James.

## THE LIBRARY OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Library is open daily for reading, and for the purpose of borrowing books. Books may also be borrowed by post, provided that at the time of application threepence in stamps is forwarded to defray the cost of postage. Arrangements have been made with Messrs. Lewis to enable the Association to obtain books from the lending library belonging to that firm, should any desired book not be in the Association's Library.

It is hoped that it will be possible to keep the Library up to date, and the Library Committee will be glad to receive suggestions concerning new books. A list of new additions will be published from time to time in the JOURNAL.

Applications for books should be addressed to The Resident Librarian, Medico-Psychological Association, 11, Chandos Street, W. Other communications should be addressed to the undersigned at Long Grove, Epsom.

H. DEVINE, } *Hon. Secretaries,*  
B. HART, } *Library Committee.*

## NOTICES BY THE REGISTRAR.

The next examination for the Certificate in Nursing will be held on May 2nd, 1910.

Essays for the bronze medal must reach the Registrar before June 15th, 1910.

The examination for the Certificate in Psychological Medicine and for the Gaskell Prize will be held the first week in July, 1910.

All information may be obtained from the Registrar, Dr. A. Miller, Hatton Asylum, near Warwick.

## NOTICES OF MEETINGS.

*Quarterly Meeting.*—The next quarterly meeting will be held, by the courtesy of Dr. R. C. Stewart, at the County Asylum, Narborough, Leicestershire, on Thursday, February 24th, 1910.

*South-Eastern Division.*—The Spring Meeting will be held, by the courtesy of Dr. Percy J. Baily, at the London County Asylum, Hanwell, on Tuesday, April 26th, 1910.

*South-Western Division.*—The Spring Meeting will be held, by the courtesy of Dr. Norman Lavers, at Bailbrook House, Bath, on Friday, April 29th, 1910.

*Northern and Midland Division.*—The Spring Meeting will be held on Tuesday April 19th, 1910.

*Scottish Division.*—The Spring Meeting will be held on Friday, March 18th, 1910.

*Irish Division.*—The Spring Meeting will be held on Thursday, April 21st, 1910.

## APPOINTMENTS.

Adderley, Miss Annie E., M.B., Ch.B., Assistant Medical Officer at Springfield Asylum of the Fife and Kinross Lunacy Board.

Boyd, William, M.B.Edin., Assistant Medical Officer to the Derby Borough Asylum.

Lee, Septimus, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer to the Wye House Asylum, Buxton.

Hunter, G. F., M.B.Aberd., Junior Assistant Physician to the Ayr District Asylum.

McDowall, Colin, M.D.Durh., M.R.C.S., Senior Assistant Medical Officer of Cheddleton County Asylum, Staffordshire.

# THE JOURNAL OF MENTAL SCIENCE

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## Part I.—Original Articles.

*Electric Bath Treatment in 108 Cases of Mental Disorder, controlled by Warm Baths in 16 cases; and the Results of an Inquiry into the Influence of the Baths upon the Excretion of Creatinine in certain of these.* By R. L. MACKENZIE WALLIS, B.A. Cantab., Lecturer in Chemical Physiology, University College, Cardiff, and EDWIN GOODALL, M.D.Lond., B.S., F.R.C.P., Medical Superintendent, Cardiff City Mental Hospital.

### I.—By EDWIN GOODALL.

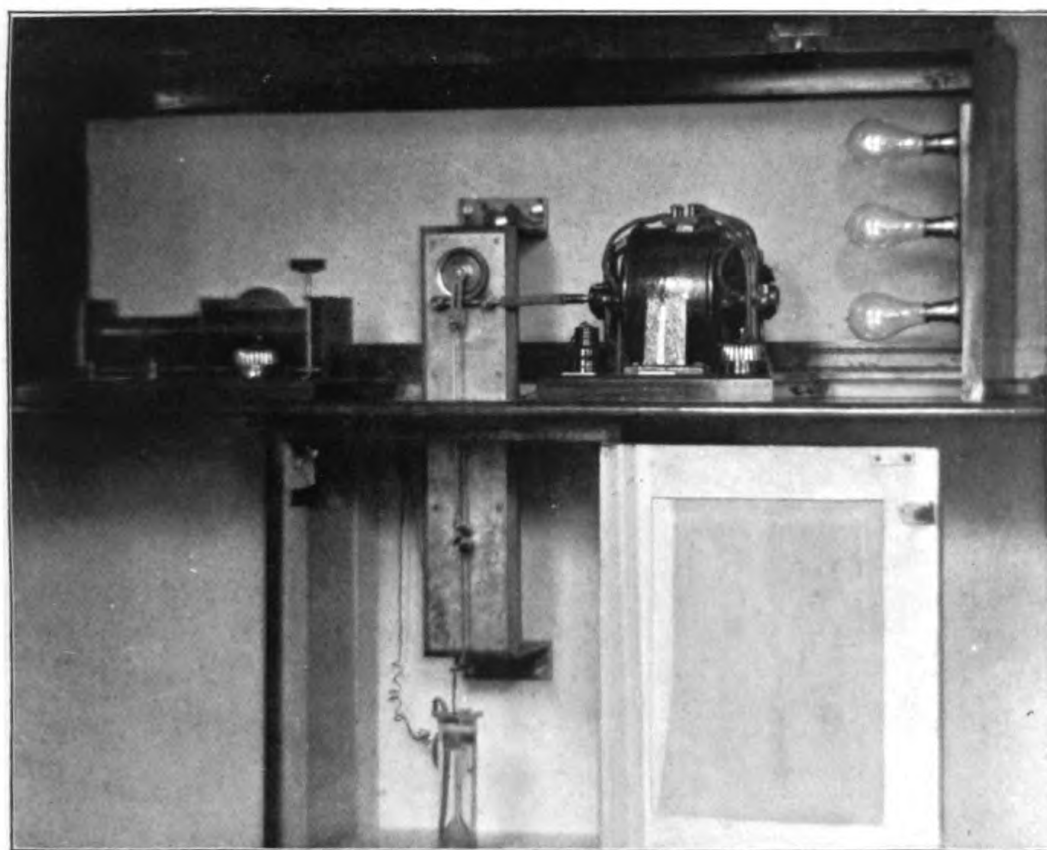
As long ago as 1901 my attention was called to the therapeutic value of electricity administered through the medium of warm water in a bath by my friend Dr. Lewis Jones, Physician in Charge of the Electrical Department, St. Bartholomew's Hospital, London. He considers this is the best means of employing electricity for general therapeutic purposes, describing it in his work on medical electricity as a method of great value whenever general stimulating and tonic effects are required. In this work will also be found reference to the treatment, some years since, of eighteen males and five females at Claybury Asylum by Dr. Robert Jones, with results which he considered satisfactory. In these induction coil currents were used in the bath. The method appeared to me likely to prove much more convenient and practical than the usual methods of faradism and galvanism, which do not lend them-

selves to the purposes of general as apart from special and local application. Largely, I think, for the lack of a convenient method of general application, electrical treatment has been almost discarded, at any rate in this country, in mental diseases. I hope in this communication to show that this therapeutic means is one which should not be neglected.

The form of current employed in this series of cases is that known as alternating and sinusoidal, in which the electrical current rises, not abruptly, but at a certain rate of progression, from zero to the maximum, falls again to zero, and flows in the opposite direction, the direction being altered several times a minute. Continuous current, obtained from the main or otherwise, is passed through a motor-transformer, rendered alternating, and thence through a sliding coil, whereby a low voltage (from 5-15 volts in the bath) is ensured.

Between 1901 and the summer of 1906, during which period I gave these baths in the course of my service as Medical Superintendent at the Joint Counties' Asylum, Carmarthen, I used no further modification, but during the past one and a half years, at the Cardiff City Mental Hospital, I have employed, in addition, the method of rhythmical variation recommended by Dr. Lewis Jones, and which he has lately described in the *Lancet*, November 13th, 1909.

Dr. Jones is of opinion that the results obtained are improved in this way. The mechanism I employ was contrived by our engineer. The current as it comes off the transformer is passed through a platinum wire, which is caused by means of a wheel-mechanism to dip slowly into water contained in an inverted funnel, and then is withdrawn. The current reaches its maximum when the point of the wire is in the widest portion of the funnel, where the resistance is lowest, and falls gradually to a minimum as the point recedes towards the top of the stem of the funnel, where the resistance is highest. The cycle is completed about fifteen times a minute. I need not go here into details of application; it suffices to say that the water in the bath is merely kept at a comfortable temperature, the patient's feet are in contact with a broad copper plate (the lower electrode), but his head is separated from the upper electrode by means of a back-rest of webbing. Each bath lasts twenty minutes, and for half this period I have been in the habit of changing the lower electrode to one of a paddle shape,



Apparatus for supply of sinusoidal current, with rhythmic variation, to bath, showing transformer on the right, wheel-mechanism, dipping wire, and inverted funnel in the centre, and sledge-coil on the left, from which current is taken to the bath.

To illustrate Mr. R. L. MACKENZIE-WALLIS'S and Dr. EDWIN GOODALL'S paper.





which is passed up and down between the legs, between the arms and body, and about the body of the patient. After the bath the patient is kept in bed for at least an hour. Each course has consisted of eighteen to twenty baths. Patients are weighed once a week during the course. I have given these baths in 120 cases, making, I should say, some 2,000 baths in all. I now communicate observations made upon cases from the clinical point of view. In conjunction with my friend, Mr. Mackenzie Wallis, observations have been conducted from the purely scientific aspect, with a view to ascertaining the effect of the baths upon metabolism, as shown by the excretion of creatinine. Details of the cases treated are given at the close of this article in tabular form under the headings "Class of Case," "Weight Changes in Connection with Baths," "No. of Baths," "Results as regards Mental Recovery or Improvement."

Out of the 108 cases here dealt with, 62, or 57.4 *per cent.*, recovered, or showed mental improvement (as evidenced by speech and conduct) in connection with, and, as I believe, largely in consequence of, the baths. Of these 62 cases, 28 recovered and 30 improved, so that they in many cases became useful members of the asylum community, and 4 were discharged relieved.

As regards the kinds of mental disorder; 30 of the 62 which either recovered or improved showed varying degrees of melancholia, 9 acute or subacute mania, 5 melancholia with stupor, 5 stupor, whilst such conditions as post-maniacal confusion, delusional, hallucinatory, confusional states, and alternating states (mania—melancholia—stupor) claimed the remainder about equally. The bulk of the patients, therefore, were cases of melancholia. Of the 46 cases which did not improve 22 had melancholia, 11 showed degrees of stupor, 4 acute or subacute mania, 3 melancholia with stupor, 3 delusional insanity; the remainder were merely individual cases of mania, melancholia and confusion. Here again melancholia claimed the bulk of the cases.

In respect to age, all the patients were between the ages of 18 and 40, and mostly under 30.

Of the 62 cases with favourable results, 39, or 63 *per cent.*, were reduced generally as regards physical state, and 16 well nourished; no statement as to this point is made in 7.

Of the 46 not improved, 20, or 43 *per cent.*, were reduced, and 21 well nourished ; no record made as regards 5.

In the cases with favourable results, therefore, the physically-reduced were more than twice as numerous as the well nourished, whilst in the unfavourable as many were well nourished on starting the baths as were reduced.

Of the 62 cases which did well, 50 showed a gain in weight, 9 a loss, and 3 no change in weight. Whilst in 19 the gain was less than 5 lbs., in 31 it was 5 lbs. or more, and in the bulk of these a good deal more. Of the 9 cases in which there was a loss this was less than 5 lbs. in 4 ; and where the loss was 5 lbs. or more the highest amounts lost were in two cases, 10 lbs. and 8 lbs. respectively. Further, of the 9 cases which lost weight 4 were persons well nourished at the outset. Of these 9 cases only 1 recovered, the others improving.

The gist of these figures, therefore, is that the great majority (80.6 *per cent.*) of cases which did well (recovered, improved) under this treatment gained weight, whilst 19.3 *per cent.* lost weight or remained stationary. Only 1 case which gave a recovery (as distinct from improvement) showed loss of weight.

Turning now to the 46 cases which did not improve, 15 showed a gain in weight, 26 a loss, and 5 no change. Whilst in 7 the gain was less than 5 lbs., in 9 it was 5 lbs. or more, but the maximum gain was not more than 7 lbs., and this in only 2 cases. The amounts gained were not comparable with those noted in the cases which did well. Of the 25 cases in which there was a loss, this was less than 5 lbs. in 13, 5 lbs. and over—in several a good deal over—in 12.

Then, the number of cases showing no change in weight numbered 5, or 10.8 *per cent.* of the total, as against 4.8 *per cent.* amongst the favourable cases.

The upshot, therefore, is that 67.4 *per cent.* of the cases which did not improve under this treatment lost weight or remained stationary in weight, whilst 32.6 *per cent.* gained weight.

It is to be observed, as Dr. Lewis Jones pointed out, that in electric bath treatment the patient's condition will often continue to show improvement after the baths have been left off.

I have further remarked in some cases that a second course of baths, given after an interval of a few weeks, has been attended with better results than were obtained after the first course.

The observations made upon the excretion of creatinine in certain of these cases, and which are referred to below, indicate that the baths are best given in successive short series of about ten baths each, with intervals of about a fortnight between. I am now giving the baths in such series.

It is worth noting that in many instances patients on their discharge have expressed their belief that the electric bath treatment was a factor in promoting their recovery.

As to duration of residence of those who recovered, the average was six and one-third months. In a large number of my earlier cases this period was reckoned from the date of admission; had it been calculated in all cases, as it properly was in the later ones, from the date of commencement of the baths, the period would have been shorter.

Apart from the 108 electric bath cases dealt with above, I have given in 16 cases simple warm baths at the same temperature as the electric baths, under the same conditions and in the same number. The patients were of the same class in the two series, and no distinction was of course made as to diet. And it may here be stated that no special diet was given to the patients who had these kinds of baths; special diet was served only to the series of cases to be mentioned later, in which the creatinine excretion was estimated. Of these 16 control cases 10 gained weight; below 2 lbs. in 4 cases, 2 lbs. in 3 cases and up to 6, 8 and 9 lbs. in 3 cases. That is, the gain was 5 lbs. or more in 30 *per cent.* as against 62 *per cent.* in the electric bath cases. Five lost weight up to 2 lbs. in 4 cases, 4 lbs. in 1 case, and in 1 there was no change. As regards mental improvement, 2 showed improvement, of whom 1 later recovered, and 14 showed no change. So that 12.5 *per cent.* showed improvement amongst the controls, as against 57.4 *per cent.* showing recovery or improvement amongst the electric bath cases.

It is obvious that the number of controls had to be limited.

The conclusion I have come to from my experience is that short courses of electric baths, of the kind described, constitute a useful means of treatment in cases of the kind above mentioned. They may advantageously be combined with measures such as Swedish movements and massage, though of course such combinations of treatment are not dealt with in this paper.

It is well known that a few physicians have brought about cures by suggestion in the waking state in patients on or about the borderland of sanity and insanity, and in such electricity might well act beneficially as a means of suggestion. I am, and surely all of experience must be, of the belief that the personal influence—which is really suggestion—of the physician and the nurse are of very great importance in dealing with many patients definitely insane, especially, of course, at certain periods in the malady, when they are more amenable to suggestion. I should be quite prepared to learn that in such cases electricity in the shape of faradism, electric bath, high-frequency or spark-discharges had been the means of completing cure, the applications having been accompanied with appropriate verbal suggestion. In the cases I have reported in this paper no suggestions were made. I might perhaps mention two cases, not included in the above series, in which the effects of auto- and verbal suggestion were observed; one was that of a youth in a state of stupor (at other times he was maniacal), who after the third bath suddenly improved, and later recovered. He spoke of the "pain" produced by the current as having been the means of bringing him round. The other case was that of a female, æt. 39, who was brought from another asylum unable to walk or to lift her left arm. She had been lying paralysed for six years, and was brought to us in an ambulance. As the result of one electric bath with emphatic use of suggestion she became somewhat collapsed; she was put to bed in hot blankets. On recovering, the temperature rose to  $101.4^{\circ}$  F.; she was flushed and excited, and began running up and down the dormitory. She was put to work in the laundry, and was discharged within a few weeks of admission. This result is of course strictly comparable to what is witnessed at religious shrines, and in connection with faith-healing agencies.

I had for some time been desirous of ascertaining whether any evidence could be obtained of the effects of electricity administered through the medium of a bath upon metabolism, and shortly after coming to Cardiff my friend, Mr. Mackenzie Wallis, of the Physiological Department, University College, Cardiff, now lecturer in physiological chemistry there, suggested that we should record the changes, if any, produced upon the excretion of creatinine by electric baths in some cases. As a control the changes produced by warm baths alone were noted.



We have accordingly for the last nine months made a large number of observations, a great number of which we have unfortunately had to discard, because of the failure to collect the whole of the twenty-four hours' urine, notwithstanding every care, in the insane with whom we had to deal, because of the rapid decomposition which the urine in several cases unaccountably underwent, and because of the difficulty of getting the patients to keep to a fixed diet. We have, however, succeeded in obtaining some reliable records, which it is hoped may hereafter be added to. In these cases a fixed diet was given. Our results are here communicated by Mr. Wallis.

*Cases which Recovered or Improved under Electric Bath Treatment.*

Class of case.	Weight-changes in connection with baths.	No. of baths.	Mental recovery or improvement, and in what time recovered.
1. Puerperal; post-manicacal confusion; much physical reduction.	Slight losses, then gains, finally gained 5 lbs.	12	Recovered in 6 mos.
2. Puerperal.	Stationary, final gain 1½ lbs.	9	Recovered in 4½ mos.
3. Puerperal, post-manicacal confusion.	Progressive gains, ending in gain of 9 lbs.	10	Recovered in 7½ mos.
4. Acute melancholia, much physical reduction.	Progressive gains, final gain of 9 lbs.	8	Recovered in 13 mos.
5. Acute mania.	Practically stationary till near end, when gain of 5 lbs.	15	Recovered in 11 mos.
6. Adolescent mania with exaltation; well-nourished.	Gains and losses of a few lbs., final loss of 5 lbs.	9	Improved.
7. Delusional; well-nourished.	Stationary till towards end, then gain 5 lbs.	9	Improved.
8. Melancholia; reduced.	Gain in weight; final gain, 12 lbs.	7	Recovered in 7 mos.
9. Primary dementia; reduced.	Slight gains; ultimate gains of 3 lbs.	16	Recovered in 9 mos.
10. Melancholia; well-nourished.	Loss of 3 lbs.	6	Slight improvement.
11. Mania at puberty; reduced.	First series: first losses, finally gain of 4 lbs. Second series: progressive gains to final of 9½ lbs.	12 9	Some improvement. Much improved, discharged relieved in 5½ mos.
12. Melancholia; some dementia; reduced.	Losses; finally lost 8 lbs.	8	Improvement, recovered several months after.
13. Melancholia; very reduced.	Constant gains; final gain, 1 st. 1½ lbs.	29	Recovered in 7 mos.

Class of case.	Weight-changes in connection with baths.	No. of baths.	Mental recovery or improvement, and in what time recovered.
14. Stupor; reduced.	Lost to 13 lbs., picked up, finally loss of 4 lbs.	22	Improvement, more marked $2\frac{1}{2}$ mos. after cessation of baths.
15. Melancholia; fairly nourished.	Slight losses, final loss of 3 lbs. (in very fine condition)	10	Great improvement.
16. Melancholia; poorly nourished.	No change in weight.	8	Discharged improved in 8 mos. after baths began.
17. Acute melancholia; reduced.	Progressive gains, finally of 9 lbs.	10	Recovered 3 mos. after baths began.
18. Acute melancholia; well-nourished.	After gaining a stone, ended with gain of only 3 lbs.	29	Improved, working in ward.
19. Melancholia with stupor; thin, anæmic.	Lost, gained slightly, final loss (uncertain amount)	12	Recovered in 5 mos.
20. Acute melancholia; fairly well nourished.	Gained 3 lbs.	7	Recovered in 5 mos.
21. Fairly acute melancholia.	Gained to 3 lbs., final gain $1\frac{1}{2}$ lbs.	15	Recovered in 6 mos.
22. Melancholia (subacute); reduced.	1st course: lost $5\frac{1}{2}$ lbs. 2nd course: progressive gains, final 8 lbs.	9 14	Some improvement. Much physical improvement.
23. Delusional; fairly well nourished.	Gradual gains, to final of $6\frac{1}{2}$ lbs.	13	Recovered in 4 mos.
24. Mania; reduced; anæmic.	Gains; final gain, $7\frac{1}{2}$ lbs.	22	Recovered 4 mos. from admission, 3 mos. after baths started.
25. Acute melancholia; reduced physically.	Gains to $5\frac{1}{2}$ lbs.; final gain, $2\frac{1}{2}$ lbs.	15	Improvement; working.
26. Melancholia; thin and poor physique.	Gained 9 lbs., sunk, final gain $1\frac{1}{2}$ lbs.	15	Recovered in 4 mos.
27. Mania; reduced.	Gained 6 lbs.	16	Discharged, relieved, in 9 mos.
28. Melancholia with stupor; reduced.	First course: progressive losses to final of 6 lbs. Second course (2 yrs. later): gains to final of $4\frac{1}{2}$ lbs.	16 18	No change. Improved, helps in work.
29. Mania: good condition.	Progressive gains; final of 5 lbs.	15	Recovered in 11 mos.
30. Melancholia; good condition.	Progressive gain; final of 4 lbs.	12	Improved, removed by friends.
31. Mania—stupor (juvenile dementia); reduced.	Gain, loss, final gain, 4 lbs.	13	Some improvement.
32. Melancholia; reduced.	Gain of $2\frac{1}{2}$ lb., finally of 1 lb.	17	Some improvement.
33. Stupor—melancholia; reduced.	Gain to first $2\frac{1}{2}$ lbs., finally, $13\frac{1}{2}$ lbs.	19	Recovered in $6\frac{1}{2}$ mos.

Class of case.	Weight-changes in connection with baths.	No. of baths.	Mental recovery or improvement, and in what time recovered.
34. Melancholia with stupor; reduced.	1st course: lost 7 lbs. 2nd course: lost 5 lbs.	15 19	No improvement. Some improvement. Left, recovered, 7 mos. after last bath.
35. Melancholia; good physical state.	Progressive gains to final of 12 lbs.	20	Reported brighter and working as result of baths; recovered in 9 mos.
36. Stupor; fair condition.	Gained 2 lbs.	18	Recovered in 6 mos.
37. Melancholia; reduced.	Progressive gains to final of 6½ lbs.	21	Recovered in 3 mos.
38. Melancholia; good condition.	First course: loss of 2½ lbs.	17	Improvement under baths, later relapse after cessation.
	Second course: gain of 2½ lbs.	12	Recovered in 10 mos.
39. Mania—melancholia; reduced.	Progressive gain to final of 2½ lbs.	30 in 2 courses, 14 days' interval.	Recovered in 9½ mos.
40. Mania—stupor; reduced.	Slight losses, increased finally by 7½ lbs.	20	Recovered in 6 mos.
41. Acute melancholia; well nourished.	Progressive gains to final of 6½ lbs.	18	Improved, became tidy, and began to work, but some mental enfeeblement remained
42. Melancholia, some congenital basis; reduced physically.	Progressive gains, final of 3 lbs.	15	Improvement, got to work, more orderly.
43. Melancholia, with some dementia.	Gained ½ lb. (= no change).	15	Improved.
44. Confusional state; reduced physically.	Progressive gains to final of 5 lbs.	First course 20, second course 18, 1 mo. between.	Improved, brighter, more rational and amenable, does some work.
45. Stupor—melancholia.	First course: progressive gains to final of 3½ lbs. Second course: at close gained 11½ lbs. on original weight.	20 13	Improved, started work, discharged relieved in 11 mos.
46. Melancholia; much reduced.	Progressive gains to final of 5 lbs.	14	Slight improvement.
47. Melancholia with stupor; reduced physically.	First, loss, 1½ lbs., finally gained 5½ lbs.	14	Considerable improvement, brighter, started working. Later relapsed, and died (2 yrs.) of phthisis.

Class of case.	Weight-changes in connection with baths.	No. of baths.	Mental recovery or improvement, and in what time recovered.
48. Melancholia ; reduced.	Losses to final of 10 lbs.	20	Some improvement, went out working.
49. Melancholia ; reduced.	Gained 4 lbs.	20	Recovered.
50. Melancholia ; fairly well nourished.	Gained $8\frac{1}{2}$ lbs.	20	Recovered.
51. Melancholia ; reduced.	Gained $6\frac{1}{2}$ lbs.	14	Improved.
52. Hallucinatory insanity (insane conduct) ; well nourished (too stout).	Lost 3 lbs.	18	Improved, working, sane conduct.
53. Delusional ; reduced.	Gains to final of 10 lbs.	18	Recovered in $3\frac{1}{2}$ mos.
54. Some dementia ; mild delusions ; reduced.	Gains to final of $7\frac{1}{2}$ lbs.	20	Improved ; employed.
55. Melancholia ; reduced.	Early losses, final gain of 10 lbs.	18	Recovered in $2\frac{1}{2}$ mos.
56. Hypochondriacal melancholia ; reduced.	Progressive gains to final of $4\frac{1}{2}$ lbs.	18	Improvement.
57. Melancholia ; reduced.	Progressive gains to final of $10\frac{1}{2}$ lbs.	18	Recovered in 3 mos.
58. Subacute mania ; fairly nourished.	Progressive gains to final of 4 lbs.	18	Improved.
59. Acute hallucinations and delusions ; reduced.	Gained $6\frac{1}{2}$ lbs.	14	Recovered in $3\frac{1}{2}$ mos.
60. Acute melancholia ; reduced.	Gained 2 lbs.	10	Improved.
61. Acute confusional state ; reduced.	Gained 5 lbs.	15	Improved.
62. Stupor ; reduced.	No change.	12	Improved.

*Cases not Improved under Electric Bath Treatment.*

Class of case.	Weight-changes in connection with baths.	No. of baths.
(a) Acute mania apparently passing into dementia ; condition fair.	Progressive gains to final of $5\frac{1}{2}$ lbs.	11
(b) Delusional insanity of slow growth ; nutrition fair.	Limited gains and losses ; final loss of 3 lbs.	14
(c) Stupor ; reduced.	Slight losses and gains ; ended same weight.	16

Class of case.	Weight-changes in connection with baths.	No. of baths.
(d) Delusional; well-nourished.	Variations; ultimate loss of 2 lbs.	9
(e) Stupor; reduced.	Variations; final loss of 3 lbs.	8
(f) Melancholia; well-nourished.	Losses; final loss 3 lbs.	9
(g) Melancholia, with persecutory ideas; well-nourished.	Gains, but finally only 1 lbs. No change.	6
(h) Stupor; marked heredity.	Lost 12 lbs., and finally "considerable loss."	8
(i) Melancholia with stupor; reduced.	Losses, final loss 12 lbs.	26
(j) Melancholia; well-nourished.	Progressive gains; final of 7 lbs.	14
(k) Recent dementia; well-nourished.	Gained 5 lbs.	8
(l) Confusional state on congenital defect.	Losses, ending with final loss of 2 lbs.	12
(m) Subacute mania; well-nourished.	Final gain of 2 lbs.	10
(n) Acute melancholia; poorly nourished.	No change.	15
(o) Acute melancholia; thin, cyanosed.	Gained 8 lbs., then lost, final loss of 3 lbs.	18
(p) Acute melancholia; thin.	Gradual losses; final loss of 5 lbs.	15
(q) Acute melancholia; thin, cyanosed.	Losses, to final loss of 9 lbs.	15
(r) Acute melancholia; spare, anæmic.	Gained 9 lbs.; final gain, 5 lbs.	14
(s) Not stated.	No change.	22
(t) Stupor; well-nourished.	Losses, to final loss of 6 lbs.	37
(u) Melancholia; physically not stated.	Final loss of 2 lbs.	14
(v) Delusional; well-nourished.	Gains, final of 7 lbs.	16
(w) Melancholia; fair condition.	1st course: gained 8½ lbs. 2nd course: gained 4½ lbs.	14 16
(x) Acute mania; good condition.	Losses, final loss of 2 lbs.	14
(y) Melancholia; good condition.	Losses, final loss of 1½ lbs.	14
(z) Stupor; good condition.	Losses; final loss of 6½ lbs.	11
(a 1) Melancholia; physically not stated.	Losses, final 6 lbs.	14
(b 1) Melancholia; reduced.	Lost 1½ lbs.	18
(c 1) Melancholia; reduced.	Losses, slight rise, final loss 7 lbs.	15
(d 1) Melancholia; reduced.	Losses, slight rise, final loss 7 lbs.	15
(e 1) Melancholia; spare, sallow.	Gains, to final gain of 6 lbs.	15
(f 1) Melancholia; good condition.	Losses, final loss 2 lbs.	13
(g 1) Melancholia; reduced.	Slight gain, final loss of 5 lbs.	20
(h 1) Subacute mania on imbecility; good condition.	Lost 3 lbs.	20
(i 1) Melancholia; reduced.	Gained 3½ lbs., final weight same.	13
(j 1) Melancholia; reduced.	Gained 4 lbs., progressively.	14
(k 1) Mania-melancholia; somewhat reduced.	Progressive gains, final 5 lbs.	39
(l 1) Melancholia; reduced.	Gained 5 lbs., finally lost 9 lbs.	19
(m 1) Stupor-melancholia; fairly good condition.	Gained 6 lbs.	20
(n 1) Stupor-melancholia; much reduced.	Gained 2 lbs.	15
(o 1) Juvenile dementia; much reduced.	Progressive losses, to final of 1st. 7 lbs.	18



Class of case.	Weight-changes in connection with baths.	No. of baths.
( <i>p</i> 1) Juvenile dementia; good condition.	Gained to 4 lbs., final gain 2 lbs.	21
( <i>q</i> 1) Juvenile dementia; fairly good condition.	Gained to final gain of 2 lbs.	18
( <i>r</i> 1) Some dementia, with delusions (an adolescent), reduced.	Losses to final of 5 lbs.	18
( <i>s</i> 1) Mild melancholia; well-nourished.	Progressive losses to final of 6 lbs.	18
( <i>t</i> 1) Melancholia; fairly well-nourished.	Gained 3 lbs.	19

## II.—By R. L. MACKENZIE WALLIS.

### *Introduction.*

THE great progress in recent years of electro- and hydrotherapeutics is well known, and so far the value of this treatment has rested mainly on clinical evidence. It is of interest, therefore, if some confirmatory observations are forthcoming from the study of metabolism, since they may add a further argument in favour of the two forms of treatment. The study of metabolism in the insane is, however, encompassed by many difficulties, especially the variations that occur, and the difficulty of establishing any definite laws for one form of insanity. The lack of exact data may possibly account for this. Our present knowledge of metabolism in the insane is due to Folin and his co-workers in America, and Hoogenhuyze and Verploegh, and also Kauffmann, in Europe. Having in view the valuable contributions of these workers, it seemed advisable to select one product of metabolism which not only showed the least variation, but at the same time would demonstrate any marked changes which were taking place. The substance which most closely approximated to these conditions was creatinine, and in consequence it was selected for the present investigation. Owing to the discovery by Folin of a very rapid, and at the same time, accurate method of estimating creatinine, its significance has received unusual attention during the past few years. The results of a preliminary investigation of the effects of the two forms of bath-treatment are given below, and seem to sustain the claims made

by other observers for this body, and justify its use in the present research.

### *Historical.*

Previous to the work of Folin (2) on this subject, and the introduction of his method of estimation, creatinine was estimated by the Neubauer-Salkowski method (1). This method consisted in forming a zinc chloride compound and estimating the creatinine as such.

Van Hoogenhuyze and Verploegh (8) subjected this method to a critical investigation, and strongly advocated the colorimetric method of Folin (2). Subsequent workers on this subject have all recommended the latter method, and employed it in their investigations.

The absence of a really reliable method for estimating creatinine possibly accounts for the discordant results of the earlier workers.

Folin (5) came to the following conclusions: (a) The amount of creatinine in the urine is independent of the amount of protein in the food, or the total nitrogen in the urine. (b) The amount of creatinine excreted is a constant quantity for each individual. (c) Creatin is not present in normal urine, and occurs only in minimal quantities after injection of this substance. As a result of these observations Folin (6) devised a new theory of metabolism, and assumed that the creatinine in the urine is a product of endogenous metabolism.

The conclusions of Folin were later confirmed by Hoogenhuyze and Verploegh (8), Klercker (10), Closson (9), and Shaffer (25); the latter, however, was not inclined to entirely accept the view as to the endogenous origin of creatinine.

Since creatinine in the urine is supposed to be directly connected with creatin in the muscles, it was thought that muscular activity might influence the excretion of this substance. Folin admitted this possibility, but Hoogenhuyze and Verploegh have clearly demonstrated that muscular work has no influence on the excretion of creatinine, provided the diet is sufficient.

If, however, the diet is insufficient, as, for example, in starvation, then the output of creatinine is increased, the material for contraction in this case being drawn directly from the muscle proteins. Shaffer (25) has obtained similar results.

Creatinine is therefore not produced as a result of energy changes within the muscle.

With regard to the factors which regulate the excretion of this body in normal individuals, Folin stated that the chief factor was the body-weight. This relationship has also been specially emphasised by Closson, Shaffer, and Benedict and Myers (11).

The ratio of creatinine excreted to the body-weight has been termed the "creatinine co-efficient," and is adopted in the following observations. The physical condition has also to be taken into account when investigating creatinine metabolism, since corpulent persons yield less creatinine than lean ones. On this observation is based the view that the creatinine excretion is proportional to the active mass of protoplasmic tissue.

Benedict and Myers (11), working on the creatinine excretion in women, showed that it was much lower than in men. The large amount of subcutaneous fat in women may possibly account for the low values obtained, as sex by itself has probably no influence.

Age appears to play a part in the output of this body, since elderly people excrete less creatinine than young people of the same body-weight.

The remarkable uniformity in the elimination of creatinine and its constancy from day to day enables us to obtain values for the normal individual. The "creatinine co-efficient," or in other words, the ratio of creatinine excreted per kilo. of body-weight, varies from 20 mgrm. per kilo. in corpulent men to 25 mgrm. in lean men. The normal limits seem to lie between 18 and 30 mgrm. per kilo. of body-weight (Folin).

The existence of other factors in regulating the creatinine output in man has been demonstrated by work on pathological subjects. The work may be summarised under three headings:

(1) Cases in which cellular activity of high intensity has been involved, such, for example, as maniacal conditions, fever, acromegaly, and exophthalmic goitre.

(2) Cases in which cellular activity is depressed, as in paralysis, fasting, and leukæmia.

(3) Cases presenting deficiencies in the functions of individual organs, especially the liver and kidney.

Considering the conditions presented in Group (1), a rise in creatinine excretion has been demonstrated by Hoogenhuyze

and Verploegh (12) under maniacal conditions and also under alcohol. Benedict and Myers (11), on the other hand, found no influence in mania. The effects of fever on the excretion of creatinine was studied by Leathes (17), who showed that the creatinine output was increased. With the disappearance of the fever the creatinine falls below normal. Similar observations have been made by Hoogenhuyze and Verploegh, and also Shaffer. Shaffer and also Froschbach (22) noted a low output in exophthalmic goitre, where the tissue katabolism may be much increased.

With regard to the conditions enumerated in the second group, a diminished output has been observed during fasting by Hoogenhuyze and Verploegh (8), Benedict (14), and Benedict and Diefendorf (15), in lymphatic leukæmia by Shaffer, and in muscular dystrophy by Spriggs (16) (half normal), and after administration of potassium bromide, Hoogenhuyze and Verploegh. Muscular rest, on the other hand, according to Shaffer, produces no change in creatinine excretion.

The influence of individual organs has been demonstrated by Mellanby (23) in the case of the liver, where a low excretion of creatinine characterises disease of that organ. Hoogenhuyze and Verploegh (12) find, besides a low output, a normal, and sometimes a high creatinine content as a result of hepatic disease. Several observers, notably Underhill and Kleiner (19), Richards and Wallace (20), Leffmann (21), and Lusk (18), have induced disease in the liver, and find a gradual fall in the amount of creatinine eliminated.

The elimination of creatinine in the insane has been investigated by Folin, in collaboration with Shaffer and Hill (3), by Benedict and Myers (11), and by Hoogenhuyze and Verploegh (12). These observers find that in accordance with other pathological conditions the output of creatinine is generally below normal. Folin concludes from his metabolism studies on over twenty cases "that mental disorders do not necessarily involve great changes in metabolism sufficient to modify the creatinine output." The creatinine excretion also bears no definite relation to the form of insanity.



*Method of Estimation.*

Throughout this investigation the colorimetric method devised by Folin in 1904 has been used. The method is based on the colour reaction given by creatinine with picric acid in an alkaline solution. The coloration so produced is compared with a half normal solution of potassium bichromate in a Duboscq colorimeter. In general, 15 c.c. of a saturated solution of picric acid and 5 c.c. of a 10 *per cent.* solution of caustic soda were added to 10 c.c. of urine in a 500 c.c. volumetric flask. The volume of urine used had frequently to be varied to ensure more accurate readings. This mixture was allowed to stand for at least five minutes, all due precautions being taken to maintain a constant temperature throughout. The contents of the flask were then diluted up to the 500 c.c. mark, and several readings taken immediately. Generally three persons made separate observations, and the results were compared. At the beginning of this research a number of estimations of creatin were made by Folin's method. The results obtained were in all cases extremely low, and in many cases negative. Consequently it did not seem advantageous to continue the estimation of this substance. The samples of urine were periodically tested for sugar and albumen. The reaction, volume, specific gravity, and general appearance, *i.e.*, whether clear or turbid, were carefully recorded daily, and these data are included in the tables below. The deposit on several occasions was microscopically examined, and revealed numerous crystals of calcium phosphate and oxalate. Chloroform was used as a preservative, and soon found to be unsatisfactory, the creatinine disappearing very rapidly. The great proneness to decomposition is a very marked feature of the urine of the insane, and it appears to be due to bacterial contamination. This contamination I am inclined to think takes place in the patient's own body, since the urine as voided was covered with a cloth and brought to the laboratory to be collected in large, clean, Winchester quart-bottles. The reaction of the urine did not seem to affect the estimation of creatinine. Owing to this ready decomposition, and with it a disappearance of the creatinine, it was thought advisable to estimate the creatinine as early as possible after the twenty-four hours' sample had been collected. In this way fairly concordant results were



obtained. After the estimation the samples were made faintly acid with acetic acid, and placed in a steam steriliser. They were then sent by road to the Physiological Laboratory, Cardiff (about four miles away) for a confirmatory reading. In many cases I was unable to strike a colour with the picric acid and alkali, and the colour when present gave a tint corresponding to just half the amount of creatinine recorded a few hours before.

For example :

	Non-sterilised sample.		Sterilised sample.
1	20 c.c. urine = 6 mm.	.	20 c.c. = 15.3 mm.
2	10 „ = 8.6 mm.	.	10 „ = 13.0 mm.
3	20 „ = 5.9 mm.	.	20 „ = 14.5 mm.

It was noted at the same time that on adding the alkali a mass of yellowish needle-like crystals were deposited, which only slowly dissolved in water. Now these sterilised samples have in many cases kept quite fresh for months after collection. An explanation is therefore required to account for this change, and at present only a provisional one can be given.

One patient whose urine was examined for creatinine did not show any creatinine at all, even with a volume of 25 c.c. The marked feature of this urine was the enormous deposit of phosphates which settled out daily.

Now the samples which gave the above results after sterilisation were all characterised by the same excess of earthy phosphates. It was consequently thought possible that the phosphates prevented the alkali or the picric acid from reacting with the creatinine, and to avoid this larger quantities of these substances were taken, but without effect. The phosphates present, if they act at all, must therefore exert their influence on creatinine itself. As to the nature of this influence, I am not at present able to state, but the subject is under investigation. Possibly the yellowish needles may represent a creatinine phosphate combination, since after removal of the phosphates this precipitate does not occur.

#### 4. *Dietary and Treatment.*

At the commencement of the experiments a creatin-free diet was adopted, and the patients kept in bed. In view of these somewhat unsatisfactory conditions, and taking into

account the previous work upon the subject, it did not seem necessary to continue this treatment. This decision was further favoured by the results of a metabolism experiment carried out by the writer upon himself. The results were as follows:

M. W—, weight 62·5 kilos. Diet: Creatin-free, consisting of eggs, milk, cheese, bread, butter, and water.

Commenced on Sunday evening.

Monday–Tuesday	. vol. 1030 c.c.	. Creatinine 1·30 gm.
Tuesday–Wednesday	„ 1100 „ . „	1·31 „
Wednesday–Thursday	„ 1050 „ . „	1·35 „
Thursday–Friday	. „ 1140 „ . „	1·36 „
Friday–Saturday	. „ 1040 „ . „	1·36 „

Exercise was taken each day, and a long walk of about twenty miles on the Wednesday afternoon. The creatinine excretion on an ordinary diet gave an average value of 1·40 gm. The creatinine co-efficient during the experimental diet period was about 22·7 mgrm.

From the above observations it will be seen that the diet has very little if any influence on the excretion of creatinine, and similarly the effects of muscular exercise.

The results with the patients are, fortunately, similarly unaffected by the change of diet. The diet was the usual hospital diet, but in some cases extra diet was given, such as eggs, milk, and cheese. Complete records have been kept of the exact amount of food given and the amounts taken at each meal.

The treatment adopted was of two forms: electric baths and warm baths at 100° F.

The temperature of all the patients under observation was quite normal and practically unaffected by the treatment.

The patients receiving electric baths improved both mentally and physically, whilst those having warm baths did not show the same improvement.

These observations have been fully described by Dr. Goodall, and it now remains to demonstrate the effects, if any, on the elimination of creatinin.

TABLE I.

*Electric baths.*—A. Le G—, female, æt. 28. Melancholia with

stupor. Weight on commencing baths, 50.5 kg.; weight on finishing baths, 50.2 kg. Height, 1.62 metres.

*Diet.*—*Breakfast*: Bread, 170.04 grm.; margarine, 14.17 grm.; coffee, 0.568 lit. *Dinner*: Bread, 56.68 grm.; meat, 170.04 grm.; peas, 141.70 grm., or potatoes, 453.44 grm. *Tea*: Bread, 170.04 grm.; margarine, 14.12 grm.; tea, 0.568, lit.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Creatinine.	Creatinine per kilo.	Water.	Remarks.
May 10	2020	1015	1.143	—	—	Preliminary observations, creatin-free diet.
" 11	1480	1010	0.768	—	—	
" 12	1540	1010	1.084	14 mgrm.	—	
" 13	1290	1015	0.842	—	—	
" 14	1150	1015	0.802	—	—	
" 15	1070	1020	0.709	—	—	Electric bath.
" 19	1110	1025	1.354	—	0.852 lit.	
" 20	855	1015	1.330	—	1.420 "	
" 21	1220	1015	1.039	23 mgrm.	1.420 "	
" 22	1300	1015	0.915	—	1.420 "	
" 23	1227	1012	—	—	1.420 "	Last bath.
" 24	1125	1015	1.40	—	1.420 "	
" 25	950	1020	0.884	—	1.420 "	
" 26	930	1020	0.865	17 mgrm.	1.420 "	
" 27	1140	1015	0.847	—	1.420 "	

A. le G—. Melancholia with stupor. The effects of the electric bath treatment on this patient are well shown in the table. The maximum figure recorded was on May 24th and the minimum on May 15th. The co-efficient in this case is practically normal.

TABLE II.

*Electric baths.*—M. A. T—, female, æt. 37. Acute melancholia. Weight on commencing baths, 54.6 kg.; weight on finishing baths, 55.5 kg. Height 1.67 metres.

*Diet.*—*Breakfast*: Bread, margarine, coffee. *Dinner*: Meat, fish (alternate weeks), bacon, vegetables. *Tea*: Bread, margarine. *Daily extras*: Milk, eggs, milk puddings.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Reaction.	Appearance.	Creatinine.	Creatinine per kilo.	Remarks.
Nov. 23	1040	1020	Acid	—	0.645	—	—
" 24	960	1020	"	—	0.537	11.7 mgrm.	—
" 25	1140	1020	"	—	0.752	—	Bath.
" 26	1100	1020	"	—	0.855	14 mgrm.	"
" 27	820	1020	"	—	0.697?	—	"
" 28	1345	1020	"	—	0.897	—	"
" 29	820	1020	"	—	0.885	15.6 mgrm.	"
" 30	1100	1020	"	—	0.862	—	"
Dec. 1	1410	1015	"	—	0.662	—	"
" 2	1320	1020	"	—	0.712	11.7 mgrm.	"
" 3	1100	1020	"	—	0.550	—	"
" 4	1185	1015	Neutral	—	0.379	12.8 mgrm.	Last bath.
" 5	1230	1017	Acid	Turbid	1.114		—
" 6	1400	1016	"	Very turbid	0.644	—	—
" 7	1550	1015	"	Turbid	0.66	—	—
" 8	1120	1015	Alkaline	"	0.425	—	—

M. A. T—. Compare Table IIa.

TABLE IIa.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Reaction.	Appearance.	Creatinine.	Creatinine per kilo.	Remarks.
Dec. 28	1330	1015	Neutral	+	0.611	—	—
" 29	750	1025	Acid	—	0.612	11.1 mgrm.	—
" 30	800	1025	"	—	0.712	—	Electric bath.
" 31	Mis sed	—	—	—	—	—	"
1910							
Jan. 1	1500	1015	Acid	—	0.675	—	"
" 2	2040	1009	"	—	0.693	11.1 mgrm.	"
" 3	1720	1010	"	—	0.722	—	"
" 4	860	1015	"	—	0.498	—	"
" 5	1440	1008	"	—	0.432	12.3 mgrm.	"
" 6	2020	1010	"	—	0.747	—	"
" 7	2710	1006	"	—	0.813	—	Last bath.
" 8	1900	1015	"	—	0.874	—	—
" 9	2080	1010	"	—	0.728	12.4 mgrm.	—
" 10	1570	1010	"	—	0.785	—	—
" 11	1710	1010	"	—	0.615	—	—
" 12	1840	1012	"	—	0.754	—	—
" 13	1720	1015	"	—	0.752	—	Electric bath.
" 14	2470	1010	"	—	0.889	13.1 mgrm.	"
" 15	1530	1015	"	—	0.765	—	"
" 16	1744	1010	"	—	0.643	—	"
" 17	1270	1015	"	—	0.726	—	Last bath.
" 18	1700	1010	"	—	0.629	—	—
" 19	2170	1015	"	—	0.868	12.6 mgrm.	—
" 20	2150	1010	"	—	0.718	—	—
" 21	1370	1015	"	—	0.609	—	—
" 22	Mis sed	—	—	—	—	—	—

*Electric baths.*—Second series. M. A. T—, female, æt. 37. Acute melancholia. Weight on commencing baths, 58 kg.; weight on ceasing baths, 58·1 kg. Height 1·67 metres.

*Diet.*—Same as before. *Daily extras:* Milk, eggs, milk puddings.

M. A. T—. Acute melancholia with suicidal tendencies. In addition to the ordinary diet the patient received two pints of milk, one egg, and milk puddings daily.

The effects of a series of electric baths of short duration are well illustrated in this table. It will be noted that there is a gradual increase in the creatinine excretion, which appears to continue after the baths have ceased. The volume of urine was considerable, and on most days 20 c.cm. had to be taken to ensure a reading with the colorimeter.

TABLE III.

*Electric baths.*—October 17th to November 1st, 1909. R. R— female, æt. 27. Acute hallucinations, delusions, secondary

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Reaction.	Appear- ance.	Creati- nine.	Creatinine per kilo.	Remarks.
Oct. 15	880	1017	Acid	—	0·519	—	—
" 16	1830	1010	"	—	0·704	13·1 mgrm.	—
" 17	650	1010	Neutral	—	0·475	—	Electric bath.
" 18	—	—	—	—	—	—	—
" 19	1120	1015	Acid	—	0·705	—	—
" 20	1218	1013	"	—	0·666	15·8 mgrm.	—
" 21	1320	1010	"	—	0·673	—	—
" 22	1000	1015	"	—	0·575	—	—
" 23	1340	1010	Alkaline	+	0·616	—	—
" 24	1240	1010	"	+	0·539	13·4 mgrm.	—
" 25	1710	1015	"	+	0·910	—	—
" 26	Missed	—	—	—	—	—	—
" 27	1270	1015	Neutral	+	0·750	—	—
" 28	760	1015	"	+	0·647	17·1 mgrm.	—
" 29	1440	1017	Acid	+	0·806	—	—
" 30	610	1015	"	—	0·202	—	—
" 31	1515	1015	"	+	0·421	—	—
Nov. 1	620	1015	Neutral	+	0·339	—	Last bath.
" 2	1650	1015	Acid	—	0·841	—	—
" 3	840	1025	Neutral	+	0·823	16·6 mgrm.	—
" 4	620	1025	Acid	—	0·626	—	—
" 5	790	1025	Neutral	+	0·633	—	—



depression. Weight on commencing baths, 42.9 kg.; weight on ceasing, 45.9 kg. Height 1.54 metres.

*Diet.*—Ordinary female diet.

The amount of the various constituents of the diet as in Table I.

R. R.—Took food well, and increased in weight as a result of treatment, *viz.*, 3 kg. This increase in weight is mainly due to a deposition of subcutaneous fat, as may be judged from the height of the patient and general appearance. The electric baths were suspended on the 18th and 19th. The maximum figure occurred during the baths, *viz.*, 0.910 grammes, and also the lowest figure, 0.202 grammes. This latter value is possibly due to an error in collection of the twenty-four hours' sample.

TABLE IV.

*Electric baths.*—D. H—, female, æt. 25. Melancholia with stupor. Weight 49 kg. Weight on commencing baths, 48.4 kg.; weight on finishing baths, 49.3 kg. Height 1.67 metres.

*Diet.*—*Breakfast:* Bread, 170.04 grm.; margarine, 14.17 grm.; coffee, 0.508 lit. *Dinner:* Bread, 56.68 grm.; meat and bacon, 170.04 grm.; vegetables, peas, 141.70 grm., or potatoes, 453.44 grm.; water, 0.568 lit. *Tea:* Bread, 170.04 grm.; margarine, 14.17 grm.; tea, 0.568 lit.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Total creatinine.	Creatinine per kilo.	Water consumed.	Remarks.
May 18	—	—	—	—	0.852 lit.	—
" 19	890	1015	0.667	—	1.704 "	—
" 20	1180	1015	0.884	—	—	—
" 21	1700	1015	1.105	16 mgrm.	1.704 lit.	—
" 22	750	1015	0.532	—	1.420 "	—
" 23	1140	1018	0.941	—	1.420 "	—
" 24	1100	1020	0.679	—	1.420 "	Bath.
" 25	1270	1015	0.842	—	1.704 "	"
" 26	1100	1025	0.947	16 mgrm.	1.420 "	"
" 27	840	1025	0.756	—	1.420 "	"
" 28	1980	1015	0.950	—	1.420 "	"
" 29	1700	1015	0.688	—	1.420 "	"
" 30	1410	1016	0.465	—	1.420 "	Last bath.
" 31	1400	1018	—	—	1.420 "	—
June 1	1140	1020	0.684	14 mgrm.	1.420 "	—
" 2	1720	1015	0.610	—	1.704 "	—
" 3	1120	1020	0.772	—	—	—

D. H.— Melancholia with stupor. The patient took her food well, but did not show the same changes in creatinine output as A. Le G. (Table I). The daily excretion of creatinine during the electric bath period was only very slightly increased.

TABLE V.

*Electric baths.*—C. G. H—, male, æt. 29. Acute melancholia. Weight, 50.2 kg.; weight on commencing baths, 49.3 kg.; weight on finishing baths, 49.3 kg. Height, 1.67 metres.

*Diet.*—*Breakfast*: Bread, 226.72 grm.; margarine, 14.17 grm.; coffee, 0.568 lit. *Dinner*: Bread, 56.68 grm.; meat, 198.38 grm.; peas, 141.70 grm., or potatoes, 453.44 grm.; water, 0.568 lit. *Tea*: Bread, 226.72 grm.; margarine, 24.17 grm.; tea, 0.568 lit.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Creatinine.	Creatinine per kilo.	Water.	Remarks.
May 10	720	1025	0.806	—	—	Preliminary observations on a creatin-free diet.
" 11	1070	1015	0.832	17 mgrm.	—	
" 12	550	1030	0.839	—	—	
" 13	750	1030	0.945	—	—	
" 14	1470	1015	0.654	—	—	
" 15	950	1020	0.665	—	—	Electric bath.
" 19	750	1020	0.945	—	1.136 lit.	
" 20	900	1020	0.758	21 mgrm.	1.136 "	
" 21	820	1025	1.418	—	1.136 "	
" 22	1180	1020	1.123	—	1.420 "	
" 23	980	1021	0.770	—	1.704 "	Last bath.
" 24	1170	1020	0.939	—	1.278 "	
" 25	940	1025	—	—	1.420 "	
" 26	840	1025	0.829	—	0.994 "	
" 27	1620	1015	0.830	18 mgrm.	1.278 "	
" 28	1220	1020	0.978	—	1.136 "	—

C. G. H—. This patient took his food very well, and showed mental improvement as a result of the treatment. The increased excretion of creatinine on May 21st and 22nd is very striking.

TABLE VI.

*Electric baths.*—J. O'B—, male, æt. 24. Weight, 60.3 kg.;

weight on commencing baths, 58 kg.; weight on finishing baths, 58.2 kg. Height, 1.67 metres.

*Diet.—Breakfast:* Bread, 226.72 grm.; margarine, 14.17 grm.; coffee, 0.568 lit. *Dinner:* Bread, 56.68 grm.; meat, 170.04 grm.; potatoes, 453.44 grm., or peas, 141.70 grm.; water, 0.568 lit. *Tea:* Bread, 226.72 grm.; margarine, 14.17 grm.; tea, 0.568 lit.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Creatinine.	Creatinine per kilo.	Water.	Remarks.
July 24	2940	1015	1.440	—	1.420 lit.	—
" 25	1055	1023	1.392	21.3 mgrm.	1.420 "	—
" 26	990	1020	0.881	—	1.420 "	—
" 27	1380	1020	1.324	—	1.420 "	—
" 28	1800	1015	1.602	22.9 mgrm.	1.420 "	—
" 29	1170	1015	1.067	—	1.420 "	—
" 30	1020	1015	0.979	—	1.420 "	—
" 31	1150	1025	1.449	21.1 mgrm.	1.420 "	—
Aug. 1	1250	1018	1.250	—	1.420 "	—
" 2	1810	1010	0.932	—	1.420 "	—
" 3	1090	1015	0.773	17.0 mgrm.	1.420 "	Bath.
" 4	890	1027	1.041	—	1.420 "	"
" 5	1650	1020	1.161	—	1.420 "	"
" 6	960	1020	1.094	15.8 mgrm.	1.704 "	"
" 7	870	1017 }	1.668	—	1.704 "	"
" 8	1665	1018 }	—	—	1.704 "	"
" 9	970	1020	1.218	—	—	—

J. O'B.— Juvenile dementia; partial stupor. This patient took his food well, and showed mental improvement. The creatinine excretion in this patient was normal, but during the baths it showed a slight decrease. The estimations were made during a period when the temperature was quite high, the laboratory temperature being 23° C. This table is inserted to show the difficulties which are encountered and the great proneness of the urine to bacterial decomposition. An interesting observation in connection with this patient was the sudden appearance of appreciable quantities of indican in the urine on August 4th, which increased in amount on the 5th and 6th. On August 9th and 10th it was quite absent, and a similar test applied at the end of the month was also negative.

TABLE VII.

*Electric baths* (from October 14th to November 1st, 1909.)  
J. L—, male, æt. 39. Melancholia, based on delusions of throat disease. Weight before commencing baths, 54·8 kg.; weight on commencing baths, 50·2 kg.; weight on finishing baths, 50·8 kg. Height, 1·62 metres.

*Diet.—Breakfast:* Bread, 226·72 grm.; margarine, 14·17 grm.; coffee, 0·568 lit. *Dinner:* Bread, 56·68 grm.; meat, 170·04 grm.; potatoes, 453·44 grm., or peas, 141·70 grm., water, 0·568 lit. *Tea:* Bread, 226·72 grm.; margarine, 14·17 grm.; tea, 0·568 lit.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Reaction.	Appear- ance.	Creati- nine.	Creatinine per kilo.	Water.
Oct. 12	850	1020	Acid	+	0·467	—	1·704 lit.
" 13	690	1020	"	—	0·772	12 mgrm.	1·136 "
" 14	790	1025	"	—	0·481	—	1·136 "
" 15	750	1020	"	—	0·585	—	1·704 "
" 16	1140	1020	"	—	0·855	—	1·704 "
" 17	840	1015	"	+	0·915	—	1·704 "
" 18	—	—	—	—	—	—	—
" 19	800	1025	Acid	+	0·920	—	1·704 "
" 20	740	1025	"	+	0·806	—	1·704 "
" 21	650	1025	"	+	0·780	17 mgrm.	1·136 "
" 22	850	1020	"	+	0·926	—	1·704 "
" 23	600	1025	"	+	0·702	—	1·704 "
" 24	470	1026	"	+	0·653	—	1·136 "
" 25	550	1030	Alkaline	+	0·753	—	1·136 "
" 26	550	1030	Acid	+	0·753	—	1·136 "
" 27	370?	1030	"	+	—	—	1·136 "
" 28	420?	1025	"	+	0·453	—	0·568 "
" 29	840	1020	"	+	0·856	—	1·420 "
" 30	440	1025	"	+	0·444	—	1·136 "
" 31	410	1030	"	+	0·618	—	1·704 "
Nov. 1	540	1025	"	+	0·615	—	1·704 "
" 2	330	1025	"	+	0·547	—	1·136 "
" 3	440	1030	"	+	0·646	12·4 mgrm.	1·704 "
" 4	460	1027	Neutral	+	0·676	—	1·704 "
" 5	500	1030	Alkaline	+	0·665	—	0·568 "
" 6	—	—	—	—	—	—	0·568 "

J. L—. Melancholia. The patient took his food well, and at different periods received both electric and warm baths. A comparison of the tables reveals the effects of the two forms of treatment. The table also demonstrates the gradual decrease in the amount of creatinine excreted when the electric baths extend over a long period.

TABLE VIII.

*Warm baths, 100° F.; May 19th-25th.—E. M—, female, æt. 24. Acute mania. Weight on commencing baths, 53·4 kg.; weight on ceasing baths, 52·1 kg. Height, 1·60 metres.*

*Diet.—Breakfast: Bread, margarine, tea. Dinner: Bread, meat, vegetables. Tea: Bread, margarine, tea. Ordinary female diet. Patient took food well.*

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Creatinine.	Creatinine per kilo.	Water.	Remarks.
May 10	920	1025	0·737	—	—	} Preliminary observations.
" 11	520	1025	0·676	15 mgrm.	—	
" 13	790	1020	0·995	—	—	
" 16	860	1015	0·662	—	1·420 lit.	—
" 19	1000	1020	1·125	—	1·420 "	Warm bath.
" 20	990	1025	1·248	19 mgrm.	1·420 "	"
" 21	840	1020	0·819	—	1·420 "	"
" 22	—	—	—	—	1·420 "	"
" 23	1330	1015	0·755	—	1·420 "	"
" 24	850	1020	0·688	—	1·420 "	"
" 25	690	1025	0·833	—	1·420 "	Last bath.
" 26	530	1025	0·734	16 mgrm.	1·704 "	—
" 27	1270	1017	0·749	—	1·420 "	—

E. M—. Acute mania. Patient took food well. (Amounts of constituents as in Table I). It will be noted that the excretion of urine does not correspond with the volume of actual fluid consumed daily. The excretion of creatinine was increased as a result of the warm bath treatment, but the effects were only temporary. This sharp rise is in accordance with the observations of Hoogenhuyze and Verploegh (patient No. 12). In all probability the baths when first given gave rise to considerable mental excitement, and this may possibly account for the increased excretion.

TABLE IX.

*Warm baths, 100° F.—M. E. W—, female, æt. 28. Adolescent dementia. Weight on commencing baths, 45·9 kg.; weight on ceasing baths, 46·3 kg. Height, 1·65 metres.*



*Diet.*—Ordinary female diet. (Amounts of constituents as in Table I.)

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Creatinine.	Creatinine per kilo.	Water.	Remarks.
May 19	850	1020	0.731	—	1.136 lit.	—
" 20	850	1015	0.603	13.9 mgrm.	1.420 "	—
" 21	900	1015	0.592	—	1.420 "	—
" 22	1000	1020	—	—	1.420 "	—
" 23	1260	1015	0.642	—	1.420 "	—
" 24	820	1020	0.844	—	1.420 "	Bath.
" 25	700	1015	0.544	—	1.420 "	"
" 26	720	1020	0.613	14.5 mgrm.	1.740 "	"
" 27	450	1015	0.554	—	1.420 "	"
" 28	1120	1015	0.565	—	1.420 "	"
" 29	600	1025	0.354	—	1.420 "	"
" 30	850	1015	0.550	—	1.420 "	Last bath.
" 31	800	1020	0.526	13.1 mgrm.	1.420 "	—
June 1	1040	1020	0.787	—	1.420 "	—
" 2	1120	1015	0.515	—	1.420 "	—
" 3	1340	1015	—	—	1.420 "	—

M. E. W.— Adolescent dementia. Patient took food well. The creatinine excretion remained fairly constant throughout, and was not influenced by the warm bath treatment to any great extent. The maximum figure was 0.844 and the minimum figure 0.354 grammes. The creatinine co-efficient is low.

TABLE X.

*Warm baths*, 100° F.—R. C—, male, æt. 25. Hypochondriacal delusions about gastric region; secondary depression. Weight on commencing baths, 57.3 kg.; weight on ceasing baths, 58 kg. Height, 1.67 metres.

*Diet.*—Ordinary male diet. (Amounts of constituents of diet as in Table VII.)

R. C—. This patient showed an increase in weight as a result of the treatment, but no mental change. The inconsistency in the volume of urine excreted is well marked, and if an average value be taken extending over three days, the excretion is found to be within the normal variations of excretion in the insane.

*Twenty-four hours' sample.*

1909	Vol.	Sp. gr.	Reaction.	Appearance.	Creatinine.	Creatinine per kilo.	Remarks.
Nov. 22	840	1025	Acid	—	0.924	14.0 mgrm.	—
" 23	650	1020	"	—	0.605	—	—
" 24	740	1030	"	+	0.886	—	—
" 25	710	1030	"	+	0.946	—	—
" 26	680	1030	"	+	0.999	17.0 mgrm.	Warm bath 27th.
" 28	570	1028	"	+	0.914	—	—
" 29	Lost	—	—	—	—	—	—
" 30	320	1030	Acid	+	0.640	—	—
Dec. 1	470	1030	"	+	0.813	13.2 mgrm.	—
" 2	400	1030	"	+	0.82	—	—
" 3	430	1037	"	+	0.98	16.7 mgrm.	—
" 4	590	1035	"	+	1.19	—	—
" 5	810	1016	"	—	0.737	—	—
" 6	960	1025	"	—	1.228	16.0 mgrm.	Last bath.
" 7	720	1025	"	—	0.856	—	—
" 8	890	1020	"	—	0.901	—	—
" 9	1000	1020	"	—	0.92	—	—
" 10	670	1030	"	—	1.10	—	—

TABLE XI.

*Warm baths, 100° F., January 16th–27th, 1910.—J. R—, male, æt. 32. Subacute melancholia. Weight on commencing baths, 55.7 kg.; weight on ceasing baths, 58.1 kg. Height 1.7 metres.*

*Twenty-four hours' sample.*

1910	Vol.	Sp. gr.	Reaction.	Appearance.	Creatinine.	Creatinine per kilo.
Jan. 14	2500	1010	Acid	—	1.00	21.3 mgrm.
" 15	2890	1012	"	—	1.38	—
" 16	2095	1012	"	—	0.963	—
" 17	1400	1020	"	—	0.938	—
" 18	1130	1012	"	—	0.508	—
" 19	2370	1015	"	—	1.266	—
" 20	1570	1015	"	—	0.942	—
" 21	1620	1015	"	—	0.891	—
" 22	1470	1015	"	—	0.735	—
" 23	1470	1015	"	—	0.735	—
" 24	1590	1015	"	—	0.815	14.6 mgrm.
" 25	1490	1015	Alkaline	+	0.745	—
" 26	1590	1015	"	+	0.540	—
" 27	1560	1015	"	+	0.702	—
" 28	1620	1018	"	+	0.729	—
" 29	950	1015	"	+	0.304	—
" 30	1910	1010	Acid	—	0.611	—
" 31	1700	1013	"	—	0.875	—
Feb. 1	1980	1012	"	—	0.910	12.4 mgrm.

*Diet.*—*Breakfast*: Bread, margarine, coffee. *Dinner*: Meat or bacon, fish, vegetables. *Tea*: Bread, margarine, tea, eggs, milk. (Amounts of constituents as in Table VII.)

J. R.— Subacute melancholia with ideas of unworthiness. In addition to the ordinary diet the patient received two pints of milk, one egg, and milk puddings. During the warm bath treatment the patient did not take his food well. The warm baths in this case apparently had no influence on the excretion of creatinine. The preliminary observations were unfortunately curtailed, and in consequence the figures given above are not strictly representative.

TABLE XII.

*Warm baths, 100° F.*—J. L—, male, æt. 37. Melancholia. Weight before commencing baths, 54·8 kg.; weight on commencing baths, 54·8 kg.; weight on ceasing baths, 53·4 kg. Height, 1·62 metres.

*Diet.*—Ordinary male diet, and similar to that when undergoing treatment with electric baths.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Creatinine.	Creatinine per kilo.	Water.	Remarks.
May 11	350	1025	0·707	—	—	Preliminary observations.
" 12	310	1015	0·339	12 mgrm.	—	
" 13	350	1025	0·567	—	—	
" 14	490	1030	0·264	—	—	
" 15	575	1025	0·788	—	—	
" 16	660	1015	0·554	—	—	Warm bath.
" 19	500	1020	0·430	—	1·278 lit.	
" 20	660	1015	0·567	11 mgrm.	1·278 "	
" 21	620	1020	0·694	—	1·278 "	
" 22	720	1020	0·813	—	1·278 "	
" 23	1043	1022	0·978	—	1·278 "	Last bath.
" 24	410	1025	0·623	—	1·278 "	
" 26	940	1030	1·269	—	1·278 "	
" 27	880	1025	0·963	16 mgrm.	1·278 "	
" 28	580	1025	0·730	—	1·136 "	

For comparison with Table VII.

TABLE XIII.

*Warm baths, 100° F.*—H. H—, male, æt. 30. Adolescent

dementia. Weight on commencing baths, 73·6 kg.; weight on ceasing baths, 74 kg. Height 1·76 metres.

*Diet.*—*Breakfast*: Bread, 226·72 grm.; margarine, 14·17 grm.; coffee, 0·568 lit. *Dinner*: Bread, 56·68 grm.; meat or bacon, 198·38 grm.; peas, 141·70 grm., or potatoes, 453·44 grm.; water, 0·568 lit. *Tea*: Bread, 226·72 grm.; margarine, 14·17 grm.; tea, 0·568 lit.

*Twenty-four hours' sample.*

1909.	Vol.	Sp. gr.	Creatinine.	Creatinine per kilo.	Water.	Remarks.
May 10	1430	1015	0·993	—	1·436 lit.	Preliminary observations.
" 11	815	1025	1·043	—	—	
" 12	1540	1015	1·540	14 mgrm.	—	
" 13	890	1015	0·679	—	—	
" 14	1450	1015	1·123	—	—	
" 15	1095	1025	0·678	—	—	
" 16	1052	1025	1·209	—	—	Warm bath.
" 19	1650	1025	2·521	—	1·136 lit.	
" 20	915	1030	1·346	20 mgrm.	1·136 "	"
" 21	1160	1025	1·252	—	1·136 "	"
" 22	920	1025	0·783	—	1·420 "	"
" 23	1000	1030	1·390	—	1·278 "	"
" 24	1250	1025	0·822	—	1·420 "	Last bath.
" 25	1120	1025	1·411	—	1·420 "	—
" 26	460	1030	0·570	12·4 mgrm.	1·420 "	—
" 27	1110	1025	1·340	—	1·420 "	—
" 28	1270	1015	0·857	—	1·278 "	—

H. H—. Adolescent dementia of long standing. This patient took his food well and gained in weight. The marked increase in the creatinine excretion, especially on May 19th, 20th, and 21st, is very striking, and at the same time difficult to explain.

TABLE XIV.

*Warm baths*, 100° F., January 24th to February 11th, 1910.—  
B. S—, female, æt. 43. Subacute melancholia. Weight on commencing baths, 55·8 kg.; weight on ceasing baths, 57·3 kg. Height, 1·54 metres.

*Diet.*—The same as patient M. A. T— (Table IIa).

B. S—. Subacute melancholia, with ideas of unworthiness and suicidal impulses. This patient took all her food and improved somewhat in mind, and certainly in general health.

*Twenty-four hours' sample.*

1910.	Vol.	Sp. gr.	Reaction.	Appearance.	Creatinine.	Creatinine per kilo.	Remarks.
Jan. 20	1010	1015	Acid	Clear	0.555	—	—
" 21	1220	1015	"	"	0.451	—	—
" 22	Missed		"	"	—	9.9 mgrm.	—
" 23	1620	1010	Acid	Clear	0.662	—	—
" 24	1250	1010	"	"	0.537	—	Warm bath.
" 25	1180	1016	"	"	0.826	—	"
" 26	1110	1014	"	"	0.477	10.9 mgrm.	"
" 27	1570	1010	"	+	0.700	—	"
" 28	1780	1012	"	—	0.712	—	"
" 29	1150	1017	"	—	0.908	—	"
" 30	1820	1010	"	—	0.728	—	"
" 31	680	1020	"	+	0.496	—	"
Feb. 1	2290	1012	"	—	1.374	—	"
" 2	920	1018	"	—	0.908	—	"
" 3	1420	1015	"	—	0.568	—	"
" 4	1050	1017	"	—	0.787	—	"
" 5	1110	1010	"	—	0.777	—	"
" 6	1260	1010	"	—	0.604	13.8 mgrm.	"
" 7	1190	1015	"	—	0.821	—	"
" 9	2210	1011	"	—	0.917	—	"
" 10	1500	1012	"	—	0.750	—	"
" 11	1020	1010	"	—	0.408	—	"
" 12	1390	1014	"	—	0.695	—	—
" 13	1125	1018	"	—	0.711	—	—
" 14	1680	1010	"	—	0.84	12.4 mgrm.	—
" 15	1010	1014	"	—	0.626	—	—
" 16	1018	1016	"	—	0.606	—	—

The creatinine excretion is low, and is almost unaffected by the treatment. The baths were repeated on fifteen consecutive days so as to be comparable with the electric bath treatment extending over a similar period. The gradual decrease in creatinine metabolism is not shown in this table (*cf.* Table VII).

*Summary of Results.*

An examination of the tables reveals the lack of uniformity in the secretion of urine, and for purposes of comparison the amount of actual fluid taken daily is given.

Folin noted the same variations in the volume of the urine in the patients he examined at the McClean Hospital for the insane.(3)

A possible explanation can be offered in the case of J. L— (Table VII), where this apparent abnormality is very well marked. The patient suffers from ptyalination, and in



consequence loses a considerable amount of water in his saliva. Since creatinine excretion is constant for each individual from day to day, it serves as a valuable means of detecting any loss of the twenty-four hours' sample. In all cases where such a discrepancy has been detected the results have been discarded. Consequently the occurrence of any loss of the total quantity excreted cannot account for this feature. The patient may possibly eliminate large quantities of water in the expired air and the sweat.

There is also a tendency for some patients to retain urine, but this error is obviated by taking the average excretion of creatinine over three successive days. The creatinine values show the normal variations as regards weight, age, and sex. The question of age hardly affects these results, as the ages of the patients are mainly between twenty-four and thirty-eight years.

The excretion of creatinine was observed at least three days before the baths began, and showed values of from 11 to 16 mgrm. per kilo. of body-weight in the case of the women patients, and from 12 to 24 mgrm. per kilo. of body-weight in the men.

As a result of the electric bath treatment the creatinine figure was increased with one exception, *e.g.*, J. O'B— (Table VI). The creatinine co-efficient in the female patients varied between 13 and 23 mgrm. per kilo. of body-weight, and in the men from 15 to 21 mgrm. per kilo.

After cessation of the baths the excretion of creatinine showed a slight diminution, but in only two cases did it fall below its former value.

The effect of the warm baths, on the other hand, was to lower or increase the excretion of creatinine to a very slight extent, and in only two cases did the figure rise much above its former level.

These observations are in accord with those recorded by Tuttle (4) on the effects of different kinds of warm baths installed at the McClean Hospital for the Insane. Folin investigated the metabolism in nine cases treated in this way, and found no definite changes. The creatinine figures are, however, not given.

A comparison of the values given above with those obtained

by other observers for the insane reveals the fact that in the electric bath cases there is a most decided increase in creatinine during the period of the baths. This increase rapidly reaches a maximum value and then gradually falls, and this fall is most marked when the treatment is prolonged (see Tables II, III, and VII).

A series of electric baths of short duration seems to be more beneficial than a single series of long duration (compare Table IIa with Table II).

The difference between the two forms of treatment is most strongly marked in the case of J. L—. He received warm baths from May 19th to May 24th inclusive, and during that time the creatinine co-efficient was 11 mgrm. per kilo. On October 14th of the same year an electric bath was given, and repeated daily until November 1st. During the first week the excretion of creatinine gradually increased, reaching a maximum during the second week of treatment. Subsequently the value gradually fell to its former level. Reference to Table VII will show the co-efficient increased from 12 mgrm. to 17 mgrm. per kilo. of body-weight.

Now what is the significance of this increase? The creatinine in the urine is now recognised to be entirely of endogenous origin, and intimately bound up with the muscular system. Although there is evidently a rough proportionality between the body-weight and creatinine excretion, the bulk of muscle seems to play a prominent *rôle*. However, it is difficult to completely reconcile all the facts with these two views. All the patients examined showed very little muscular development or muscular efficiency, hence the low figures obtained.

The results seem to support Shaffer's view that creatinine is an index of a special process of metabolism taking place in the muscles, and that the muscular efficiency depends upon it. Exposure of the muscles to a sinusoidal current probably intensifies this process, increasing the general tone of the muscles, and consequently the creatinine metabolism. The effect of electric baths on these patients affords considerable support to this view, not only from the aspect of creatinine metabolism, but also from the clinical observations.

With regard to the origin of creatinine, a valuable and interesting contribution has been made by Waldemar Koch (7). He points out the close chemical relationship between lecithin

and creatinine, and thinks that the latter is derived from the disruption of lecithin molecules.

In this connection it is interesting to note that the increase of creatinine was always accompanied by an increase in inorganic phosphates in the urine.

The results recorded above, although not definitely conclusive, seemed to be of sufficient interest to warrant publication. A much more detailed investigation is, however, necessary, and we hope at a later date to contribute further observations on this subject. As far as is possible the same patients will be examined to obtain the creatinine excretion extending over the same periods of time, but without adopting any bath treatment. It also seems necessary to investigate the effects of baths on the normal healthy individual, and also on other pathological subjects besides the insane, especially patients with muscular atrophy.

#### Conclusions.

- (1) The excretion of creatinine in the insane is in general subnormal.
- (2) Electric bath treatment, using the sinusoidal current, tends to increase the creatinine in the urine.
- (3) Treatment with warm baths without the current has very little, if any, influence on the creatinine excreted.
- (4) The variations in volume of the urine excreted and the great proneness to bacterial decomposition seem to be characteristic of the insane.

#### BIBLIOGRAPHY.

- (1) Neubauer.—*Ann. de Chem. u. Pharm.*, cxxxvii, p. 288.
- (2) Folin.—*Zeit. f. Physiol. Chem.*, xli, 1904, p. 223.
- (3) Folin.—*Amer. Journ. of Insanity*, vol. lx, 1904-5, p. 732; *ibid.*, lxi, p. 299.
- (4) Tuttle.—*Ibid.*, vol. lxi, p. 179.
- (5) Folin.—*Amer. Journ. Physiol.*, vol. xiii, 1905, p. 66.
- (6) Folin.—*Ibid.*, vol. xiii, p. 117.
- (7) Koch.—*Ibid.*, vol. xv, 1905, p. 15.
- (8) Hoogenhuyze and Verploegh.—*Zeit. f. Physiol. Chem.*, vol. xlvi, 1905, p. 415.
- (9) Closson.—*Amer. Journ. Physiol.*, vol. xvi, 1906, p. 252.
- (10) Klercker.—*Biochem. Zeit.*, vol. iii, 1907, p. 45.
- (11) Benedict and Myers.—*Amer. Journ. Physiol.*, vol. xviii, 1907, p. 377.

- (12) Hoogenhuyze and Verploegh.—*Zeit. f. Physiol. Chem.*, vol. lvii, 1908, p. 161.  
(13) Benedict and Myers.—*Ibid.* (II), p. 397.  
(14) Benedict.—*Carnegie Inst. of Washington*, 1907, Publ. No. 77.  
(15) Benedict and Diefendorf.—*Amer. Journ. Physiol.*, vol. xviii, 1907, p. 362.  
(16) Spriggs.—*Biochem. Journ.*, vol. ii, 1907, p. 206; also *Quart. Journ. Med.* (Oxford), vol. i, 1907, p. 63.  
(17) Leathes.—*Journ. of Physiol.*, vol. xxxv, 1907, p. 205.  
(18) Lusk.—*Amer. Journ. of Physiol.*, vol. xix, 1907, p. 464.  
(19) Underhill and Kleiner.—*Journ. of Biol. Chem.*, vol. iv, 1908, p. 165.  
(20) Richards and Wallace.—*Ibid.*, vol. vii, 1908, p. 179.  
(21) Leffmann.—*Zeit. f. Physiol. Chem.*, vol. lvii, 1908, p. 476.  
(22) Froschbach.—*Arch. f. Pharm. u. Path. Exp.*, lviii, 1908, p. 112.  
(23) Mellanby.—*Journ. of Physiol.*, vol. xxxvi, 1908, p. 447.  
(24) Wolff and Shaffer.—*Journ. Biol. Chem.*, vol. iv, 1908, p. 439.  
(25) Shaffer.—*Amer. Journ. Physiol.*, vol. xxvii, 1908, p. i.

## DISCUSSION,

At the Quarterly Meeting at Leicester, February, 1910.

THE PRESIDENT said he was sure all present were highly delighted with the most elaborate paper of Dr. Goodall and Mr. Mackenzie Wallis, which was stamped with the evidence of a great deal of labour, time, and thought. The authors seemed to have taken the hydro-electric treatment of mental diseases entirely out of the region of pure empiricism, and to have erected it upon a plane of something like scientific investigation, producing, therefore, accuracy of result. He did not propose to enter into details, but he desired to ask the gifted authors whether it was regarded by the latest authorities that the amino-acids, glycosin, creatin, leucine, and so on, were the necessary precursors of urea formation during the protein metabolism in the tissues, particularly in the muscles; and if the creatinine which resulted from such changes in the muscle creatin, which Mr. Wallis found in the urine, was simply the surplus of those precursors which were eventually converted into ammonia and carbon dioxide, and so passed the liver and the kidney as urea. That appeared to be a very important point, and he would be glad to know whether there was a more simple mode of splitting off, as had been suggested by Drechsel's experiments, experiments which were quite classical, in which strong, alternating currents were passed through solutions containing proteid material. That was found not to bring those amido-acids into being, but carbon dioxide and ammonia. And it was suggested that that was the immediate and simple method which might occur in the human economy. Perhaps this might be too simple to explain what occurred in the human economy; and he would like to know whether recent research upheld the possibility of this occurring, because he had never yet seen a reply to Professor Halliburton's question, that if those amido-acids were the precursors to urea formation from proteid metabolism, why did one not find them more freely escaping into the blood and passing on into the liver in ordinary metabolism, in the forms of leucine, glycosine, and creatinine in very great abundance?

DR. PERCY SMITH desired to congratulate his late colleague, Dr. Goodall, and Mr. Mackenzie Wallis on the paper which they had produced. Dr. Goodall would remember that many years ago tepid baths were used a good deal at Bethlem Hospital in the treatment of certain excited and maniacal cases, and with the greatest possible benefit. There was no doubt that, as a result, patients who were excited became calmer—whether *post hoc* or *propter hoc* was another question—and there was general improvement. They gained weight, their sleep came back,



and eventually they recovered. Therefore, he was interested in Dr. Goodall's statement that short baths were preferable to long ones. He was speaking purely of warm baths, as in those days they had no sinusoidal current, and no means of obtaining proper electric baths. He believed Dr. Goodall said there were 108 cases treated, and that 62, or 57·4 *per cent.* recovered or were mentally improved; so that 46 did not improve. And the author compared those 108 cases which had been treated by the electric current and bath with 16 others who had the warm-bath treatment only. He thought it was rather unfortunate, for purposes of comparison, that a larger number—for instance an equal number—were not treated by pure warm baths. Of the 16 cases treated in the latter way the author said those who did not improve on that method were the patients who did not gain weight. One knew that gaining weight was a common accompaniment, if not the cause, of the improvement in many acute mental cases. And of course the improvement in the cases which were treated with the electric bath was most marked in those who were physically weak at first; and no doubt physical improvement was going on—whether concurrently with it, or because of it, was a matter on which there was room for doubt. He was very much interested in the question of the increased excretion of creatinine in the cases treated by the electric bath. It occurred markedly in one of the sixteen cases treated by mere warm bath, without electricity; and the investigation raised the question as to whether the creatinine was the elusive toxin for which everyone seemed to be looking as the prime cause in mental disease. Many said that a toxæmia of some form was at the root of insanity. He would like to hear the views of the authors on that point: whether they thought the investigation brought the profession nearer to the causal agent in mental disorder.

Dr. G. SCOTT WILLIAMSON said he would like to congratulate the authors of the paper on its supreme value, and also remarked on the fact that it was the first attempt in the annals of British psychology to tackle the functional abilities of the insane. A number of workers were taking up the question in America, but even there the workers at the subject were few. A contribution like the present one was supremely welcome. With regard to creatinine, he would like to mention some observations which he made some time ago with regard to a condition in which there was undoubted toxæmia, namely, in tuberculosis, and especially phthisis. The patients in question were all undergoing sanatorium treatment, and, as a result of that, some of them were increasing in body-weight. But the creatinine in no way varied with such increase in body-weight. Every three or four weeks the amount of creatinine was estimated, and it was found to be that of a practically normal individual, although some of the patients had pronounced cavitation and toxæmia, as evidenced by their rise and fall of temperature. The increase in body-weight owing to the sanatorium treatment presumably meant a pure increase of fat. With regard to the patients who were undergoing the graduated labour treatment at the sanatorium—and presumably, from the estimation of their opsonic indices, they were overcoming their toxæmia and neutralising some of it—in them, as the weight increased, the creatinine showed signs of rising, but not sufficiently to enable one to say that the increase was *pari passu* with the increased body-weight, *i.e.*, that the muscles were functionally capable of breaking up and giving rise to more creatinine. In the patients who were subjected to inoculation treatment, one found that if one induced a very profound negative phase, *i.e.*, a condition of hypertoxæmia—perhaps the toxæmia was very different, and might have differed from the circulating toxæmia, as it was an endotoxæmia coming from the bacillary bodies themselves—the creatinine showed a very profound fall. In a patient who was losing much weight the creatinine remained markedly stationary. Those observations were not sufficient on which to form any conclusions, but he thought they were worth relating, and might, perhaps, help to elucidate some of the problems brought forward by Dr. Goodall and Mr. Mackenzie Wallis.

Dr. STODDART said that he had been wondering whether, after all, it was a good thing to get rid of the creatinine. He would like to know whether creatinine was really a body poison. Could anyone give information who had had experience of examining the creatinine excretion in normal people? If so, he would be glad to know whether the sinusoidal current increased the creatinine excretion of the average normal person. He did not know whether Dr. Goodall adopted the same classification as he did himself; but the cases which Dr. Goodall mentioned as



being treated by sinusoidal current all seemed to him cases which one would have expected to recover under the treatment hitherto commonly adopted. With regard to the treatment by plain warm baths, his experience practically coincided with that of Dr. Percy Smith, namely, that warm baths certainly had a beneficial effect.

Dr. ROBERT JONES sent the following communication, which was read by Dr. Bond: I have tried the electric bath treatment in the case of adolescents mostly. In these, as also in some adults, the form of insanity was that of melancholia. Some of the cases presented well-marked melancholia attonita and the so-called anergic stupor. Most of these cases are characterised generally by gradual deterioration; they stand or sit about in a fixed or passive attitude, and have almost always to be considerably coaxed (if not forcibly fed) in order to get them to take nourishment. The mental condition is so unsatisfactory that some authorities call the disease "primary dementia" or "dementia præcox," and it is certainly not a very curable form. After consultation with Dr. Lewis Jones and the encouragement experienced by using a simple method of electric bath treatment, I tried it upon eighteen male and five female patients. The five female cases improved greatly in health; two were phthisical, and whilst undergoing the electric bath treatment both of them gained several stones in weight. One of them died later of phthisis, but the other was discharged recovered; the third recovered, the fourth developed epilepsy, and the fifth remains at present as a helper in the asylum. In addition to these cases the electric bath treatment was used for certain cases of puerperal insanity, and it was considered to be a help towards restoration. Of the eighteen men, nine have left the asylum (six recovered, two were discharged relieved, and one has improved but not recovered). All the men gained weight under treatment, being weighed weekly, and the record has been kept, the average gain of the nine who left the asylum being seven pounds during the bath treatment, which lasted for an average period of seven weeks, but some received baths for nine or eleven weeks. The maximum gain in one case whilst under treatment was twenty-two pounds, the next highest being seventeen pounds. Of the nine cases remaining under treatment one was phthisical, one was suffering from progressive muscular atrophy; the others are considerably improved mentally, the stupor or profound melancholia having quite passed off. Upon the whole I consider the results to be satisfactory. So little has yet been done in regard to the systematic treatment of the different forms of insanity by electro-therapy that it is, perhaps, premature to formulate any definite conclusion, but I consider that in electric baths we have an excellent and valuable stimulant to metabolism. The skin in the insane is in an abnormal condition, but whether the improvement after baths is due to increased elimination, or due to vascular changes brought about by the bath, or whether it is due to increased nervous stimulation and metabolism, I am not prepared to say. I should especially recommend this treatment in the melancholia of adolescent and apathetic cases such as I have referred to.

Dr. GOODALL, in reply, said he was glad to find the paper had aroused so much interest. He would leave his colleague to answer the points concerning the creatinine excretion. Dr. Percy Smith commented on the paucity of the controls. He, Dr. Goodall, agreed that sixteen control baths were few, and he would be pleased to see the results in a larger number. But, as he had intimated, it was an arguable point how far it was justifiable to conduct such control experiments, since merely putting a patient into a bath at a temperature of 99°-100° F. for twenty minutes at a time scarcely constituted treatment. He had asked a friend at another asylum if he would make similar controls, to assist in getting a larger number of them, and that gentleman's reply was that he did not feel justified in doing so. Some of the patients had electric baths and warm baths as well, and they said the electric bath did them more good than did the plain warm bath. He thought that repeated warm baths, at increasing temperatures up to, say, 105° F., had a sedative effect, but this was an entirely different proceeding; he did not believe it could be shown that baths at the low temperature employed had a stimulating effect; certainly not such a tonic, stimulating effect as electric baths had. Dr. Lewis Jones, an authority on the subject, said that the latter were invigorating and stimulating in a number of cases. Dr. Lewis Jones had had a large experience in the matter, both in private and in hospital practice. In reply to Dr. Bedford Pierce, he would say that the effects of the sinusoidal current were improved by rhythmic variation. Dr. Stoddart had seemed to suggest that the

class of cases treated were those which got well if left to Nature and the nurse. To prove that the results were not due to the electric bath it would be necessary to ignore wholly the results of sixteen careful controls, and furthermore, to take an equal number of like cases, adopt no treatment, giving the same diet merely, and compare the ratio of recoveries and the recovery-period with those obtaining in the cases treated by current. He believed, as stated, that if he had reckoned the recovery-period in all cases from the time of commencing the bath treatment, it would have been found to be considerably shorter than that recorded.

Mr. MACKENZIE WALLIS, in reply, said he desired to thank his audience for having listened to such a long and tedious paper. In reply to the President, creatin was derived originally from amino-acids, because if one took the developing chick one found that there was no creatin at all, and in the hatched chick there was only a very small quantity. It was only after the fourteenth day from the hatching that one found the maximum amount of creatin in the muscles, and only after that stage was creatinine eliminated. There was practically no creatin given in the food of those chickens, and so creatin must be derived from the proteins of the egg. When the muscle had reached its saturation-point, creatinine was excreted—in other words, creatin was used up in muscle, and the surplus was converted into creatinine and excreted. The precursors which had been mentioned were possible ones, but there was no proof at present that those amino-acids were formed and absorbed as such, or in combination with each other. Possibly a number of amino-acids were united together, and for utilisation by the organism the nitrogen was split up and disseminated; and that nitrogen went to the liver and was converted into urea. The small amount which was required to maintain the wear and tear of the tissues, and also derived from amino-acids produced in digestion, represented the endogenous metabolism, and the body creatinine was included among the substances formed. With regard to the work of Drechsel, the splitting up of proteids by passing a strong current, it was possible that the result of the electric baths was to increase the protein-destruction in the body. Unfortunately, they were unable to investigate the subject owing to lack of apparatus; but it was hoped that that would be done in the future, and then they would have some idea whether the increase in the creatinine under electric bath treatment was concomitant with the increase in the other nitrogenous constituents. He was more inclined to Koch's view of the origin of creatinine, *i.e.*, from lecithin, rather than from amino-acids; but the lecithin itself was probably derived from amino-acids in the first place. Creatinine seemed to be indirectly connected with the destruction of lecithin. Dr. Percy Smith had mentioned the possible toxic origin. The creatin in the muscles was toxic; but when it was converted into creatinine—and it was a simple hydrolysis which took place in the liver—this creatin was rendered non-toxic. The former was a strongly basic chemical body, but it had no toxic effect. Creatin was constantly being produced in muscle, and the surplus was got rid of. It was necessary to convert the residue into an innocuous form, and that conversion was carried out by the liver, and the surplus was excreted. In the insane there was a very low excretion of creatinine, and it was possible that creatin in the muscles might be oxidised into some other body, and that other body might cause the toxic effect. By increasing the creatinine excretion, one eliminated the danger of conversion into some other, and probably more toxic, body. The origin from lecithin was suggested by the fact that lecithin was always being broken down; because even if phosphates were excluded from the food one still found organic phosphates in the urine. In answer to Dr. Williamson's remarks, there was always an increase of creatinine with an increase of temperature. If the oxidation of the tissues was lowered there was a consequent lessened excretion, and that might account for what Dr. Williamson had observed. It was creatin which was the poisonous substance, and the body converted that creatin into creatinine, and after that conversion it became innocuous. With regard to testing the effect of the electric bath on the normal person, that had not been done by his colleague and himself. It certainly should be, but possibly it would not show any effect at all. One might take all kinds of exercises, and increase the diet, but the creatinine excretion would not be affected in an ordinary individual by such means. Possibly a more liberal dieting of the patients under observation would have made a good deal of difference to the creatinine excretion. He did not think the routine institution diet was sufficient.

*Observations on the Morbid Anatomy of Mental Disease.* By GEORGE A. WATSON, M.B., Pathologist to the Lancaster County Asylum, Rainhill.

THE following observations are founded upon the records of 301 autopsies performed by myself at Rainhill Asylum. They are concerned principally with certain abnormal and morbid manifestations which occur within the crania of the insane. Of these the chief are, on the one hand, indications of subevolution, as shown by macroscopic structural defects of the cerebral hemispheres, such as deficiency of weight or of convolutional complexity, and on the other, evidence of dissolution as exhibited by wasting of the cerebral hemispheres. The relationship existing between these abnormal and morbid manifestations and certain other intracranial appearances is also discussed. No attempt, however, has been made—for reasons which will afterwards be given—at any close correlation between these abnormal and morbid manifestations and the mental states recorded during life. The observations, therefore, are of a pathological rather than a clinical nature.

The method of recording the intracranial appearances has been the same as that used by Dr. Bolton at Claybury Asylum and subsequently there by myself. Adoption of the method at Claybury led me to conclusions similar to those of Dr. Bolton, and I thought it desirable to know whether or not a further and more extended experience of the method in another asylum would confirm these conclusions.<sup>(1)</sup>

The subject will be dealt with under the following headings :

PART I.

*Examination of Material from Rainhill Asylum.*

1. Method of recording and grouping the intracranial appearances (pp. 229, 230).

2(a). The average weight of the cerebral hemispheres in the different groups (p. 231).

(b) The convolutional pattern of the cerebral hemispheres in the different groups (p. 235).

(c) The mental state of the patients (p. 236).

Conclusions (p. 238).

3. Factors which may influence the passage of the cases from the earlier to the later groups (p. 240).

(a) Age of the patient ; (b) duration of the attack of insanity ;

(c) degeneration of the cerebral vessels (pp. 241, 242).

Conclusions (p. 245).

## PART II.

### *Comparison of Results Obtained at Claybury Asylum and at Rainhill Asylum.*

1. The weights of the cerebral hemispheres (p. 246).

2. The percentage of cases in the different groups (p. 249).

3. The comparative amount of degeneration of the cerebral vessels at Claybury and at Rainhill (p. 250).

General conclusion (p. 251).

## PART I.

### EXAMINATION OF MATERIAL FROM RAINHILL ASYLUM.

#### 1. *Method of Recording the Intracranial Appearances.*

The intracranial appearances to which attention has been paid are: Conditions of the dura and pia-arachnoid; the amount of sub-dural and sub-arachnoid fluid—whether natural or in slight, moderate, large, or great excess; the manner in which the cerebral hemispheres strip—whether naturally or more readily than naturally, readily, very readily, or extremely readily; and the amount, if any, of cerebral wasting. The absence or presence of degeneration of the cerebral vessels, and the degree of degeneration when present, has also been recorded, together with notes concerning the general conformation and convolutional pattern of the cerebral hemispheres.

The cerebral hemispheres are weighed, firstly unstripped, and then one or other, usually the left, sometimes both, after being stripped of its membranes. The amount of loss after stripping is noted, this serving as a useful check upon the other



observations concerning the intracranial appearances.<sup>(1)</sup> It has been found convenient for other purposes to confine the stripping of the cerebrum to that of one hemisphere in the majority of instances, and the left has usually been chosen for certain practical reasons. This, however, is of no particular moment in so far as the following statistics are concerned, because in cases of gross lesion, general paralysis, and perhaps epilepsy excepted, it has not been common to find a difference in weight between the right and left hemispheres of more than a few grammes. The rare instances in which any marked difference has occurred have not been included.

For reasons which will appear obvious, all cases of gross lesion which would be at all likely to appreciably affect the weight of the cerebral hemispheres have been excluded, as also have all general paralytics, epileptics, idiots, and imbeciles. Many of the cases, and certainly all the doubtful ones, have been examined microscopically. The cases from which the data used in compiling the statistics have been derived are, therefore, examples of the ordinary asylum population—cases of confusional insanity, mania, melancholia, paranoia, and the dementias, excepting, as before stated, those affections associated with gross lesion, general paralysis, or epilepsy. The tables are thus founded upon observations in 301 consecutive cases of insanity, in no way selected, with exception of the above mentioned necessary omissions, and of a very few cases which, for some special reason or other, could not be included.

A grouping of the intracranial appearances found in these cases has been made in the following manner :

Group I : No morbid appearances. No, or very slight, excess of fluid ; membranes appear normal, and strip about naturally ; no obvious wasting of the cerebral hemispheres.

Group II : Slight morbid appearances. Slight to moderate excess of fluid ; membranes strip a little more readily than naturally ; slight cerebral wasting.

Group III : Moderate morbid appearances. Moderate to considerable excess of fluid ; membranes strip readily ; moderate to fairly marked cerebral wasting.

<sup>(1)</sup> The actual amount lost after stripping will probably vary a little with different observers according to the extent to which the hemisphere is drained of fluid before the preliminary weighing, but the relative amount of loss, in the different groups to be presently described, should remain fairly constant in a given series of cases examined by an individual observer.



Group IV: Marked morbid appearances. Large excess of fluid; membranes strip very readily; well-marked cerebral wasting.

Group V: Gross morbid appearances. Great excess of fluid; membranes strip extremely readily; very marked cerebral wasting.

The above will serve as a guide to the method of placing the individual cases in the different groups. It is not pretended that all the particulars associated with a certain group will apply absolutely and in every detail to some isolated cases, although in the majority they will do so. At times instances occur in which, owing to certain bodily conditions or modes of death, the amount of intracranial fluid is increased above that which one is accustomed to find when these conditions are absent, or the membranes separate either with unwonted facility or with unusual difficulty, or in which it is difficult to estimate the degree of cerebral wasting, if any, owing to this being obscured by œdema of the brain substance. Hence, sometimes some little judgment may be required before a given case can be placed in what appears to be its appropriate group, and occasionally the intracranial morbid appearances taken together are so anomalous as to necessitate the actual omission of the case; but such instances as the latter are rare, and are invariably explicable on the grounds of the bodily conditions present.

The most important of these bodily conditions which may, but do not always do, modify the ordinary intracranial appearances, is tuberculosis—the most important because of its frequency. Certain other bodily diseases which tend towards a general water-logging of the system may have the same deleterious effect. With regard to tuberculosis, this was the actual cause of death in 31 *per cent.* of the total cases, *viz.*, of those in Group I 37 *per cent.*, in Group II 40 *per cent.*, in Group III 31 *per cent.*, in Group IV 19 *per cent.*, and in Group V 20 *per cent.* Thus tuberculosis was most frequently found in the cases in Groups I and II and least frequently in those in Groups IV and V.

Naturally also, as the grouping is an entirely artificial one, the groups tend to shade into one another to some extent. Whilst Group III stands out fairly clearly by itself, it is not always quite easy to decide whether a given case should be allotted to Group I or to Group II, which groups somewhat resemble each

other, or similarly to Group IV or to Group V. Still, it is quite unlikely, for example, that any case which properly should have been placed in Group II has been included in Group IV, and as regards the smaller differences, which might be put down to the personal equation of individual workers, these would be greatly discounted by the large number of instances involved. In an investigation of this description great exactitude of detail is almost an impossibility; all that can be hoped for as the outcome is a generalisation. The method, however, in spite of these strictures, is one that can be readily applied by any close observer of intracranial appearances, and, indeed, substantially accurate results should be obtained by all but the most inexperienced.

2. The groups may now be considered from the following aspects :

- (a) The average weight of the cerebral hemispheres.
- (b) The convolucional pattern of the hemispheres.
- (c) The mental state of the patients.

2 (a). *The Average Weight of the Cerebral Hemispheres.*

This is shown in the following table.

TABLE I.—*Weights of the Stripped Hemispheres in Grammes.*

	Males.		Females.		Average loss of weight after stripping the hemispheres.	
	Number of cases.	Average weight of hemispheres.	Number of cases.	Average weight of hemispheres.	Males.	Females.
Group I.—No morbid appearances . . .	20	540	34	510	22.5	19
Group II.—Slight morbid appearances . . .	37	569	47	494	25.5	24
Group III.—Moderate morbid appearances . . .	46	561	30	508	32	29
Group IV.—Marked morbid appearances . . .	24	557	28	506	38	32
Group V.—Gross morbid appearances . . .	22	545	13	482	48	40.5
Total number of cases.	149	General average weight of hemispheres	Total number of cases	General average weight of hemispheres.		
		554	152	500		

The most outstanding feature shown by the table is the small difference in the weights of the hemispheres in the different groups, considering that the hemispheres placed in Group I and II presented no or little wasting, and those in Groups III, IV, and V either moderate, marked, or gross wasting. In the case of the males, indeed, the average weight of the hemispheres with gross wasting in Group V slightly exceeds that of the hemispheres with no wasting placed in Group I. In the case of the females the average weight of the hemispheres in Group V only falls short of those in Group I by 28 gm.

The weight of any given hemisphere in Groups I and II must be either that of, or nearly that of, its original weight. It is, of course, impossible to say what was the original weight of any individual hemisphere in the Groups III to V, but those in Group III must have lost a not inconsiderable amount of their original weight—may be 30 to 50 gm.—whilst those in Groups IV and V may have lost anything from 50 to 80 gm., and in some instances, particularly in the case of the larger hemispheres, probably much more. Therefore the hemispheres in Groups III to V must have originally weighed decidedly more than those in Groups I and II, and it is thus evident that the cerebra which have undergone most wasting are, on the whole, those which were originally the heavier ones.

The relationship of the weights of the hemispheres in the different groups to one another is naturally the significant feature rather than the relationship of these to a supposed normal average. It would, however, be of interest, if not of advantage, to compare these weights with that of the average weight of the cerebral hemispheres of the sane population of the district from which the inmates of this asylum are derived. Unfortunately such average weight is not known, and the mean brain weight appears to differ to some extent in different localities.

The most recent and comprehensive statistics bearing upon the question of the normal average brain weight, at all ages from fifteen to eighty years, are those of Marchand.<sup>(2)</sup> According to this observer the average weight of the unstripped encephalon in 1,234 cases was 1,400 gm. for the male and 1,275 gm. for the female. By using Huschke's ratio of 13 to 87 for the conjoined cerebellum and pons to the cerebrum, and

by allowing 20 grm. as being approximately the amount which the normal hemisphere loses on stripping, it may be readily calculated that the average weight of the normal stripped hemisphere is about 589 grm. for the male, and about 534 grm. for the female. Marchand, however, derived his data entirely from Hessians. From the statistics of the older investigators it is not easy to arrive at a correct idea of the average weight of the brain at all ages. In the tables compiled by Marshall, from extensive data collected by Boyd, the number of cases in each of the columns is not stated, so that the exact average of the whole cannot be calculated, but it would appear from these tables that the general average weight of the brain for both sexes is lower than that given by Marchand. Boyd found the mean weight of the brain at from twenty to forty years to be 1,360 grm. for the male and 1,230 grm. for the female, or calculated as above about 572 and 515 grm. respectively for the stripped male and female hemispheres. Between the ages of thirty and thirty-five years Broca gives an average weight of 1,421 grm. for the male and 1,269 grm. for the female brain, or about 618 grm. and 532 grm. for the stripped hemispheres of the males and females.<sup>(3)</sup>

So far as can be judged, it would appear that the mean weights of the normal male and female cerebral hemispheres, as calculated from Marchand's figures, are probably approximately applicable to the average hemisphere weights of the general sane population of this district, and at least there is every reason for believing that these weights so applied are not excessive. Although the matter is of very secondary importance, these average weights for the stripped male and female hemispheres, *viz.*, 589 and 534 grm. respectively, may therefore for the moment be compared with the average hemisphere weights of the cases in the different groups in Table I. The following facts will then be noticed. Firstly, that the average weights of the hemispheres in Groups I and II are appreciably below the above figures; especially is this noteworthy in Group I, which includes hemispheres showing no wasting. Secondly, if a reasonable number is added to the average weights of the hemispheres in each of the Groups III, IV, and V, in order to compensate for the amount lost owing to wasting, it is plain that the majority of the hemispheres in these groups cannot originally have weighed less than the presumed normal



average, and the probability is that they weighed considerably more.

It is obvious that the *defect* of weight of the hemispheres in Group I, taken as a group, is the consequence of subevolution, seeing that these hemispheres presented no evidence of wasting ; and it is equally clear that most of the deficiency of those in Group II is similarly the result of subevolution, as the loss due to wasting in these cases was slight. Also, it is evident that the lack of weight of the hemispheres in the Groups III to V, taken as groups, is largely, and in some instances probably entirely, the result of a *loss* due to dissolution, for all these hemispheres showed wasting in various degrees from moderate to gross.

A point worthy of special mention when dealing with the weights of the cerebral hemispheres in this connection, is that a given deficiency of weight which is the consequence of subevolution is probably of more significance than is the same loss of weight the result of dissolution. In the first place, in subevolution microscopical examination shows that the actual defect may lie not so much in gross diminution in the number and size of the cortical neurones as in deficiency of the finer connections of the latter, and the weight of these finer connections must be comparatively small, whereas in dissolution not only are the more delicate neuronic connections affected, but the bodies of the neurones themselves are actually more or less destroyed. Also in definite cerebral dissolution, naked-eye demonstration of marked destruction of the whole neurone is given by such manifestations as thinning of the white matter and dilatation of the ventricles ; in cerebral subevolution uncomplicated by gross lesions such manifestations are absent or slight. Further, in subevolution deficiency of weight is generally the equivalent of almost purely neuronic defect, and is, therefore, the actual deficiency. Loss of weight which is the result of dissolution does not usually represent the total neuronic loss, this being greater than appears, because such loss may be, and so often is, compensated for to some extent by vascular and neuroglial proliferation, particularly in the outer layers of the cortex. Hence, from these considerations it seems certain that more importance may be attached to the *defect* in weight of the hemispheres placed in Groups I and II in which the signs of dissolution were absent or slight, than to the actual



loss of weight of the hemispheres in Groups IV and V, in which these signs were marked.

2 (b). *The Convolutional Pattern of the Cerebral Hemispheres.*

Some notes have been made concerning the convolutional pattern in all the cases, and in many instances a very detailed account of the general formation and fissuration of the hemispheres is on record. In fact, because of its obvious importance, much time and attention have been devoted to this matter. For present purposes, however, it will be sufficient to reduce the description of the convolutional pattern to such terms as "very complex," "above average," "average," "simple," and "very simple." In the following table will be found the number of hemispheres in each group which have been judged to answer to one or other of these descriptions. The numbers in one or two of the groups are rather small for reduction to percentages, but for easy appreciation of the results it is convenient to adopt this method.

A glance at the table shows that in Group I, both male and female, the majority of the hemispheres are below the line —, being either simple or very simple in pattern. In Group II a greater proportion are above the line—in the case of the males the majority being so. Groups III, IV, and V agree in that a large proportion of the hemispheres (87 to 91 *per cent.* in the case of the males and 77 to 80 *per cent.* in that of the females) are above the line, being either very complex, above average, or average in pattern. In fact there is a rather striking similarity in the percentage of hemispheres in each of the Groups III, IV, and V, male and female respectively, which are either of average or above average complexity of pattern. The hemispheres in Groups I and II are therefore on the whole decidedly more simple in convolutional pattern than are those in Groups III to V. Moreover, it may be stated in general terms that local areas of under-development, gross anomalies of fissuration, and other defects which may be classed as cerebral stigmata, although found to a certain extent in some of the hemispheres in all the groups, are more frequently met with in those hemispheres placed in the earlier than in those belonging to the later groups. It must be admitted, however, that these stigmata are not uncommon even in large and complex hemispheres, but their

number in such instances is almost always more limited and their prominence much less than it is in the smaller and simpler hemispheres.

TABLE II.—*The Convolutional Pattern of the Cerebral Hemispheres.*

*Males.*

Pattern.	Group I. No. of Per cases. cent.	Group II. No. of Per cases. cent.	Group III. No. of Per cases. cent.	Group IV. No. of Per cases. cent.	Group V. No. of Per cases. cent.
Very complex .	0 } 35	1 } 67	3 } 87	1 } 87.5	2 } 91
Above average .	0 } 35	3 } 67	7 } 87	2 } 87.5	2 } 91
Average .	7 } 35	21 } 67	30 } 87	18 } 87.5	16 } 91
Simple .	12 } 65	9 } 32	6 } 13	3 } 12.5	1 } 9
Very simple .	1 } 65	3 } 32	0 } 13	0 } 12.5	1 } 9
Total cases .	20	37	46	24	22

TABLE II—*continued.*

*Females.*

Pattern.	Group I. No. of Per cases. cent.	Group II. No. of Per cases. cent.	Group III. No. of Per cases. cent.	Group IV. No. of Per cases. cent.	Group V. No. of Per cases. cent.
Very complex .	1 } 38	0 } 47	0 } 80	1 } 78	0 } 77
Above average .	0 } 38	2 } 47	1 } 80	2 } 78	1 } 77
Average .	12 } 38	20 } 47	23 } 80	19 } 78	9 } 77
Simple .	8 } 62	10 } 53	5 } 20	6 } 21	3 } 23
Very simple .	13 } 62	15 } 53	1 } 20	0 } 21	0 } 23
Total cases .	43	47	30	28	13

2 (c). *Mental State of the Patients.*

Bolton was able to show, from personal investigation into the mental state of the patients included in his series, that the groups grade very closely with the degree of dementia present at the time of death. Unfortunately no data are available

which will enable me to make a pathological and clinical correlation of the cases in this series with any degree of accuracy. The form of insanity from which the patient was supposed to have suffered at the time of death is stated in the return supplied to me as a matter of routine practice by the medical officer in charge of the case, the return being made out in accordance with the schedule of the Commissioners in Lunacy. According to this schedule of forms of insanity the medical officer is under no obligation to state in connection with certain of the chronic cases whether he considers that any dementia existed or not. Consequently in the majority of such instances he has expressed no opinion on this matter, and the returns, therefore, do not always supply information in the form which is necessary for the present purpose. At times such a statement as "mania with mild dementia" occurs; this case should clinically, according to Bolton, come under Group II. Another return may simply state "chronic melancholia." Inquiry as to this case may elicit the reply that a moderate degree of dementia existed, but as the symptoms of melancholia apparently predominated no mention was made of dementia in the return; such a case should clinically be placed in Group III. As personal inquiries have not been made in every instance, the returns, if any use were to be made of them, would have to remain as they stand. This being so, even if the cases were arranged under two headings only—*viz.*, (1) insanity other than dementia, including all those in which no mention of dementia occurs, and (2) all the dementias—for the reason just stated a number of cases would inevitably be classed as insanity other than dementia, which properly should have been placed under dementia. On the other hand, some cases would probably be included under dementia in which no dementia existed at all if by this term is to be understood "a permanent psychic disability," for there is no knowing at the present time in what sense the term may have been employed by a junior medical officer of perhaps only very limited clinical experience. Apart from this there are the difficulties of diagnosis to be considered—difficulties which no doubt diminish as experience increases. Attention has already been directed to certain bodily conditions, the most important being tuberculosis, which may modify the ordinary intracranial appearances, although they do not necessarily do so. The same bodily conditions may complicate the diagnosis from the

clinical aspect ; indeed, difficulties of this nature are likely to be much greater *ante-mortem* than *post-mortem*. The mental lethargy and confusion exhibited by some patients who suffer from a more or less long-standing illness may be readily mistaken for a permanent psychic disability. It has previously been shown that the percentage of deaths from tuberculosis is highest in Groups I and II and considerably lower in Groups IV and V ; it is presumably, therefore, in connection with cases in the first two groups that mistakes in diagnosis—if such mistakes have been made—are the more likely to have occurred. This may explain why such a large proportion of cases included under Group I (*viz.*, 20 *per cent.* of the males and 41 *per cent.* of the females) were considered to have suffered from dementia, although all, *post-mortem*, showed no cerebral wasting nor any other intracranial morbid appearance.

Owing to these various considerations the returns relating to the mental state of the patients are of little or no value for the purpose in view. If, however, the cases are roughly divided into the two classes before indicated, *viz.*, according to the absence or presence of dementia as stated in the returns, it is found that in the majority of the cases in Groups I and II (70 *per cent.* and 54 *per cent.* respectively) no mention is made of dementia, whilst the larger proportion of the cases in Groups III, IV, and V (67 *per cent.*, 77 *per cent.*, and 81 *per cent.* respectively) were regarded as having shown symptoms of dementia. Thus, although the data concerning the mental state of the patients in this series are by no means satisfactory, such general conclusion as can be drawn from them agrees, to some extent, with our previous impressions regarding the close association existing between the intracranial morbid appearances and the presence of dementia.

### *Conclusions.*

The different groups have now been considered from the aspects of the average weight of the cerebral hemispheres, of their convolitional pattern, and, in so far as the data available will allow, of the mental states of the patients included in the series. It has been shown that the hemispheres in Groups III to V—those which had undergone the most wasting, and which, therefore, presumably should have belonged to the patients



who exhibited the most dementia—were, taken as groups, originally the heavier ones as compared with those in Groups I and II. It has also been shown that the hemispheres in Groups III to V possess, on the whole, the better convolucional pattern, and are relatively the more free from cerebral stigmata. If developmental deficiency in weight of the cerebrum, simplicity of convolucional pattern, and the frequent presence of cerebral stigmata—not necessarily any one of these features by themselves, nor in individual instances, but considered as a general average of a large total—are to be looked upon as criteria of amentia, then the majority of the hemispheres included in Groups I and II were derived from cases of amentia. This is as far as a generalisation made from statistics gathered from macroscopic sources will enable us to go. Such a generalisation will not, of course, apply in certain individual instances, for two additional factors of the utmost importance require to be taken into consideration, *viz.*, the depth of the cerebral cortical layers and the degree of development of the neuronic elements in these layers. For example, a comparatively large cerebrum may be found, on microscopic examination and measurement, to possess a poorly developed and relatively shallow cortex, and *vice-versâ*. This, however, does not imply that a generalisation such as the above is without value.

In going over the details from which Table I was compiled, it was found that hemispheres of almost all weights within the ordinary limits occurred in all the groups. The following table shows the number of instances in each group (with the percentages) in which the hemisphere weight was above, and the number in which it was below, that of the average weight of the series of cases. This average weight is, of course, considerably below that of the normal.

Whilst the general result shown by Table III is somewhat similar to that exhibited by Table I, it will be seen that in a large number of instances the hemispheres in Groups I and II weighed more than the average of the series. These groups also, as has been previously shown, contain a fair percentage of cases with hemispheres of at least average convolucional pattern.

It might be argued that the above conclusions are not valid because a certain proportion of cases with hemispheres of good weight and well-developed pattern are to be found in the earlier groups. Groups I and II, however, it may be pointed out,



contain the hemispheres of a number of recent or comparatively recent cases, some of which doubtless would have been discharged recovered had the patients not died of some inter-current illness, whilst others, it is reasonable to suppose, would in the course of time have passed on to one or other of the later groups. In some instances these cases possessed hemispheres of a weight considerably above that of the average of the series, and the inclusion of these in Groups I and II naturally increases the average weight of the hemispheres in these groups. Conversely, many hemispheres which were originally small (and of poor convolutional pattern) have passed out of the earlier groups into the later, and these reduce the average weight of the hemispheres in the later groups.

TABLE III.—*The Number of Cases in each Group in which the Hemisphere Weight was above, and the Number in which it was below, that of the General Average Weight of the Series. General Average Weight of the Series : Males, 554 grammes ; Females, 500 grammes.*

	Males.					Females.				
	No. of cases.	No. above general average weight.	Per cent.	No. below general average weight.	Per cent.	No. of cases.	No. above general average weight.	Per cent.	No. below general average weight.	Per cent.
Group I . .	20	7	35	13	65	34	18	53	16	47
„ II . .	37	25	68	12	32	47	21	45	26	55
„ III . .	46	28	61	18	39	30	19	63	11	37
„ IV . .	24	13	54	11	46	28	15	54	13	46
„ V . .	22	9	41	13	59	13	4	31	9	69
Total cases .	149					152				

### 3. *Factors which may Influence the Passage of the Cases from the Earlier to the Later Groups.*

Some consideration may now be given to the chief of these factors, *viz.*, (a) the age of the patient, (b) the duration of the attack of insanity, (c) the presence or absence of degeneration of the cerebral vessels.

In the following tables the average age at death of the patients in the different groups and the average duration in the asylum are placed side by side.

TABLE IV.—*Average Age at Death.*

	Males.	Females.
Group I . .	36	36
" II . .	42	48
" III . .	50	59
" IV . .	58	65
" V . .	60	66
General average age . .	49	52

TABLE V.—*Average Duration in Years.*

	Males.	Females.
Group I . .	3	4
" II . .	6	4
" III . .	9	10
" IV . .	9	13
" V . .	8	6
General average duration . .	7	7

(a) *Age of the patients.*—Although the average age at death together with the average duration in the asylum increases as one passes from Groups I and II to the later groups, yet included in Groups I and II are to be found patients of almost all ages. Thus, in Group I, male, 4 out of 20 patients (20 *per cent.*) were above the general average age of 49, the oldest being 66 years of age; in Group I, female, 3 out of 34 (9 *per cent.*) were above the general average age of 52 years, the oldest being 59. In Group II, male, 11 out of 37 (30 *per cent.*) were above the general average age, the oldest being 63; Group II, female, contains patients of all ages up to 72 years, and 19 out of 47 (40 *per cent.*) were above the general average age of 52 years.

(b) *Duration of the attack of insanity.*—A large proportion of the cases in Group I, both males and females, were recent or fairly recent ones, yet one male was in the asylum for twenty years, one female for eleven years, and many others for periods varying from four to nine years. The patients included under Group II, although only slight wasting of the cerebral hemispheres existed, had been in the asylum for varying periods up to thirty-one years in the case of the males and eighteen years in that of the females, in fact, 25 out of the total 84 cases in this group (*i.e.*, 30 *per cent.*) had been in the asylum for over the general average duration period of seven years.

Thus it would appear that neither the age of the patient nor the duration of the attack of insanity is in itself an im-

portant factor determining the passage of any given case from one of the earlier groups to one of the later.

(c) *Degeneration of the cerebral vessels.*—The following tables (VIa and VIb) show the total amount and the degree of cerebral vascular degeneration found in all the cases, also (VIb) the number of patients with vascular degeneration in each group who were below, and the number of those who were above the general average age for the males and females respectively.

TABLE VIa.—*Number of Cases of Cerebral Vascular Degeneration in each Group.\**

*Males.*

	No. of cases in group.	Average age of group.	Number of cases with vascular degeneration.			Group percentage of vascular degeneration.	Group percentage of moderate and severe vascular degeneration.
			Slight.	Moderate.	Severe.		
Group I .	19	36	2	—	—	11	0
" II .	37	42	8	1	1	27	5.4
" III .	46	50	19	8	4	67	26
" IV .	24	58	6	7	6	79	54
" V .	22	60	4	3	14	95	77
	148		39	19	25		

TABLE VIa—*continued.*

*Females.*

	No. of cases in group.	Average age of group.	Number of cases with vascular degeneration.			Group percentage of vascular degeneration.	Group percentage of moderate and severe vascular degeneration.
			Slight.	Moderate.	Severe.		
Group I .	33	36	1	—	—	3	0
" II .	47	48	12	3	2	36	10.6
" III .	30	59	5	6	9	66	50
" IV .	28	65	2	6	18	93	86
" V .	13	66	—	1	11	92	92
	151		20	16	40		

\* One male and one female omitted as insufficient data were recorded in these cases.

TABLE VIb.—*Number of Cases with Cerebral Vascular Degeneration above and below the General Average Ages of 49 years (Males) and 52 years (Females).*

*Males.*

	No. of cases in group.	Number of cases with vascular degeneration.											
		Slight.				Moderate.				Severe.			
		Below 49 years.	Average age.	Above 49 years.	Average age.	Below 49 years.	Average age.	Above 49 years.	Average age.	Below 49 years.	Average age.	Above 49 years.	Average age.
Group I	19	1	42	1	51	—	—	—	—	—	—	—	—
" II	37	2	40	6	59	—	—	1	63	—	—	1	57
" III	46	6	39	13	58	1	47	7	65	1	36	3	65
" IV	24	1	22	5	59	—	—	7	62	—	—	6	67
" V	22	1	48	3	55	1	45	2	52	—	—	14	69
Total	148	11	—	28	—	2	—	17	—	1	—	24	—

TABLE VIb.—*continued.*

*Females.*

	No. of cases in group.	Number of cases with vascular degeneration.											
		Slight.				Moderate.				Severe.			
		Below 52 years.	Average age.	Above 52 years.	Average age.	Below 52 years.	Average age.	Above 52 years.	Average age.	Below 52 years.	Average age.	Above 52 years.	Average age.
Group I	33	1	30	—	—	—	—	—	—	—	—	—	—
" II	47	4	45	8	60	—	—	3	70	—	—	2	61
" III	30	3	41	2	61	—	—	6	65	—	—	9	70
" IV	28	—	—	2	67	—	—	6	61	—	—	18	69
" V	13	—	—	—	—	—	—	1	69	—	—	11	62
Total	151	8	—	12	—	—	—	16	—	—	—	40	—

When attempting to make any correlation between degeneration of the cerebral vessels and cerebral wasting, it is no doubt advisable to exclude instances of slight vascular degeneration, as it is probable that, even if vascular degeneration is able to initiate or to hasten the progress of cerebral dissolution, it is

only the moderate and severe forms of atheroma which would have any very appreciable effect. As the number of examples in the above tables of moderate and severe degeneration of the cerebral vessels is rather small in any of the groups, the male and female cases may be considered together. It will then be seen that no instance of moderate or severe atheroma occurred in Group I. In Group II there were 7 examples out of 84 cases, or 8 *per cent.*; in Group III 27 out of 76, or 35.5 *per cent.*; in Group IV 37 out of 52, or 71 *per cent.*; and in Group V 29 out of 35, or 83 *per cent.* Thus decided degeneration of the cerebral vessels and definite cerebral dissolution appear to be associated features.

This correlation can also be shown in another way. It has been stated that whilst the greater number of the hemispheres in Groups I and II are of less weight than the majority of those in Groups IV and V (and certainly were originally so if the loss of weight due to wasting of those in the two latter groups is considered), yet hemispheres of almost all weights within the usual limits occur in all the groups. Table III shows the number of hemispheres in each group having a weight above, and the number with a weight below that of the general average of the series of cases. The 71 cases in Groups I and II, male and female, with either no or only slight cerebral wasting, which possessed a hemisphere weight *above* that of the average of the series, showed no sort of constancy either as regards the age of the patients, which varied from nineteen to seventy years, or in respect to the period of duration in the asylum, which ranged from a few days to twenty years. All these cases, however, agreed in being free from severe degeneration of the cerebral vessels, and only 4 instances of moderate atheroma (5.6 *per cent.*) occurred in the whole 71 cases. In Groups IV and V, male and female, there are 46 cases in which the hemisphere weight was *below* that of the average of the series. Whilst the ages of these patients was generally higher, and the duration period usually longer than that of the cases in Groups I and II, the most striking feature exhibited by these cases in Groups IV and V, with marked or severe cerebral wasting, was the prevalence amongst them of moderate or severe degeneration of the cerebral vessels, this being found in 38 cases (6 moderate and 32 severe) or 82 *per cent.* of the whole.

Group III occupies an intermediate position between Groups



II and IV with regard to the prevalence of cerebral vascular degeneration as it does in respect to the degree of cerebral wasting. There is a wide gap between the percentage amount of moderate and severe atheroma in Group III and in Groups IV and V, taken together, particularly with regard to the amount of severe atheroma. This gap—represented in the matter of severe atheroma by 17 *per cent.* on the one hand and 56 *per cent.* on the other—suggests that in the majority of instances cerebral dissolution only reaches a moderate stage in the absence of gross degeneration of the cerebral vessels. In a number of the rarer cases in which cerebral dissolution was marked, although there was no gross naked-eye degeneration of the cerebral vessels, microscopical examination has shown a special affection of the smaller vessels and considerable neuroglial proliferation. These cases, it is of interest to note, have not infrequently been regarded clinically as probably being examples of general paralysis.

### *Conclusions.*

The apparent effect upon cerebral dissolution of age, of duration of the attack of insanity, and of degeneration of the cerebral vessels, may be summarised as follows :

(1) Neither the age of the patient nor the duration of the attack of insanity is in itself an important factor concerned in the production of, or in hastening the progress of, cerebral dissolution.

(2) Atheroma and age may be independent of one another.

(3) It is a matter of general experience that simple senility is not necessarily associated with gross degeneration of the cerebral vessels ; also that cerebral vascular degeneration, even if gross, does not necessarily lead to or hasten the progress of cerebral dissolution, for although no instance happens to be included in this series, very occasionally a case is met with showing severe atheroma but little or no cerebral wasting.

(4) Whilst propositions 2 and 3 are admittedly true, it is evident that cerebral vascular degeneration and cerebral dissolution are commonly concurrent phenomena, and that “ the percentage amount and also the severity of naked-eye degeneration of the cerebral vessels vary directly with the degree of ” cerebral wasting present.

(5) In the majority of cases cerebral dissolution only reaches a moderate stage in the absence of gross degeneration of the cerebral vessels.

Although the above line of argument in the treatment of this subject is somewhat different to that adopted by Bolton, the general conclusions arrived at are very similar.

## PART II.

### COMPARISON OF RESULTS OBTAINED AT CLAYBURY ASYLUM AND AT RAINHILL ASYLUM.

#### 1. *The Weights of the Cerebral Hemispheres.*

It has already been stated that there are grounds for believing that the mean weight of the normal brain varies to some extent in different localities. It is therefore of interest, for this and for other reasons, to compare the table of weights of the cerebral hemispheres obtained from Rainhill Asylum with that already published by Bolton concerning the weights of the hemispheres at Claybury Asylum. Although Bolton did not expressly exclude all idiots and imbeciles from his statistics, yet on going through his data it will be found that there are in his series of non-epileptic cases only eight male and female idiots and imbeciles altogether—all in Group I.<sup>(4)</sup> Reference to the brain weights of these shows that their inclusion makes no appreciable difference to average weight of the whole series of hemispheres in this group, so that the data contained in the subjoined table are for all practical purposes quite comparable.

The sets of figures derived from Claybury and from Rainhill both point to the similar conclusion that the weights of the cerebra in Groups III to V must have been originally greater than that of those in Groups I and II. The Rainhill figures are, however, the more striking of the two, because of the greater weight of the hemispheres—as compared with those from Claybury—in Groups III, IV, and V, particularly of those in the two latter groups.

The general average weight of the hemispheres in all the groups is : for Claybury, males, 538 grm. ; females, 471 grm. ; and for Rainhill, males, 554 grm. ; females, 500 grm. It will be noticed that the Rainhill hemispheres are heavier than the

TABLE VII.—*Comparison of the Weights of the Cerebral Hemispheres from Claybury and Rainhill Asylums.**Males.*

	CLAYBURY.			RAINHILL.		
	No. of cases.	Per cent. of total cases.	Average weight of hemispheres.	No. of cases.	Per cent. of total cases.	Average weight of hemispheres.
Group I.—No morbid appearances . . .	16	15	553	20	13	540
Group II.—Slight morbid appearances . . .	14	13	565	37	25	569
Group III.—Moderate morbid appearances . . .	27	25	551	46	31	561
Group IV.—Marked morbid appearances . . .	27	25	509	24	16	557
Group V.—Gross morbid appearances . . .	25	23	513	22	15	545
	Total number of cases.		General average weight of hemispheres.	Total number of cases.		General average weight of hemispheres.
	109		538	149		554

TABLE VII.—*continued.**Females.*

	CLAYBURY.			RAINHILL.		
	No. of cases.	Per cent. of total cases.	Average weight of hemispheres.	No. of cases.	Per cent. of total cases.	Average weight of hemispheres.
Group I.—No morbid appearances . . .	36	14	499	34	22	510
Group II.—Slight morbid appearances . . .	66	26	480	47	31	494
Group III.—Moderate morbid appearances . . .	59	23	482	30	19	508
Group IV.—Marked morbid appearances . . .	44	17	455	28	18	506
Group V.—Gross morbid appearances . . .	50	19	437	13	8	482
	Total number of cases.		General average weight of hemispheres.	Total number of cases.		General average weight of hemispheres.
	255		471	152		500

TABLE VIII.—*Average Ages at Death.*

	CLAYBURY.		RAINHILL.	
	Males.	Females.	Males.	Females.
Group I . . . . .	38	35	36	36
" II . . . . .	55	50	42	48
" III . . . . .	57	54	50	59
" IV . . . . .	68	68	58	65
" V . . . . .	70	69	60	66
General average age . . . . .	57		49	52

Claybury ones in all the groups excepting male Group I, in which the Claybury hemispheres exceed those from Rainhill by 13 gm. ; there is, however, a difference of only 4 gm. in the hemispheres in male Group II derived from the two places. In all the other groups, male and female, there is a more or less decided difference in the weight of the hemispheres obtained from the two institutions—a difference in favour of Rainhill. This difference in Group III is 10 gm. in the case of the males and 26 gm. in that of the females ; in Group IV it amounts to as much as 48 gm. in the males and 49 gm. in the females ; and in Group V to 32 gm. in the males and 45 gm. in the females. It is particularly significant that the difference is greatest, on the whole, in Groups III to V, which groups have been shown to contain, as groups, not only the cerebra which were originally the heavier ones, but also those which possessed the better convolucional pattern. These also are, of course, the cerebra which have suffered most from dissolutive changes.<sup>(1)</sup>

It might be suggested that the greater mean weight of the Rainhill cerebra can be partly accounted for by the supposed taller stature of the northern people. Marchand (*loc. cit.*), however, states that there is no constant relationship between body-weight and brain-weight, although the mean weight of the brain in males and females of short stature is *rather less* than that of those of average height. Also, that the smaller size of the

(<sup>1</sup>) I also have the impression, derived from my own experience at the two asylums, that the Claybury cerebra were of a generally simpler pattern—although naturally with many exceptions—than those at Rainhill, but an impression of this kind is not of any great value, and may indeed be fallacious.

female brain is not dependent on the lower stature of the female, for the mean weight of the brain in women is less than is that of men of equal height. Judging from the older statistics of Marshall (*loc. cit.*) the influence of stature upon brain-weight appears to be rather more marked. If, however, the conjoined cerebellum and pons is allowed for according to Huscke's ratio, the greater weight of each cerebral hemisphere in the taller people is not very considerable, and it is greater in the males than in the females. The matter in any case is of little importance in so far as the present statistics are concerned, for, owing to the kindness of Dr. Robert Jones, I have been able to make a comparison between the average heights of the patients admitted to Claybury and to Rainhill Asylums. Dr. Jones states that the average height of all the admissions to Claybury Asylum during 1909—at least of all the adults whom it was possible to measure—was, for 203 males  $66\frac{1}{8}$  in., and for 219 females  $61\frac{1}{2}$  in. The average height of the adult patients admitted to Rainhill Asylum during the years 1908 and 1909 was, for 316 males 65 in., and for 264 females  $60\frac{1}{2}$  in. These figures are sufficient to indicate that there is no difference in stature between the two asylum populations such as would be likely to appreciably affect the weight of the cerebral hemispheres.

2. *The Percentage of Cases in the Different Groups.* (See Table VII [p. 247].)

With regard to the percentage of cases which have been placed in the respective groups at Claybury and at Rainhill, if the males and females are taken together it will be seen that a greater proportion of cases belonging to Groups I and II occurred at Rainhill than at Claybury, and a lesser proportion belonging to Groups IV and V, especially to the two latter Groups (II and V) in each instance. The former fact may perhaps be accounted for by the non-existence in the County of Lancaster of a body similar to the Metropolitan Asylums' Board. The latter fact is somewhat difficult of explanation excepting on the grounds that, apparently for local administrative reasons, fewer recent, or fairly recent, senile cases were admitted to Rainhill than to Claybury. It will be seen from Table VIII (p. 248) that the average age at death is less in all the groups except one (female



Group I) at Rainhill than at Claybury, and that in Groups IV and V the difference amounts to as much as ten years in each group in the case of the males and to three years in each group in that of the females. Had there been a greater proportion of elderly people with the commonly concomitant vascular degeneration amongst the Rainhill cases, it is probable that the percentage of cases allotted to Groups IV and V would have been higher. Whatever the explanation may be, I was surprised, some little time after taking up my duties at Rainhill, to find few instances of gross cerebral wasting (exclusive of cases of general paralysis) compared with the number I had been accustomed to see at Claybury, and it is interesting to have this impression confirmed by further experience and by the evidence of statistics.

### 3. *The Comparative Amount of Degeneration of the Cerebral Vessels.*

Bolton's tables dealing with the question of vascular degeneration in his Claybury cases are compiled somewhat differently to mine, but the two sets of statistics can be readily contrasted. It would appear that not only is degeneration of the cerebral vessels more prevalent at Rainhill than at Claybury, but that it is found at an earlier age in the former institution. Possibly this can be accounted for by differences in the habits of the general population of the two districts. With regard to the matter of "drunkenness" and "the comparative prevalence of insanity ascribed to intemperance," the county of Lancaster is, or was, according to the Fifty-ninth Report (1905) of the Commissioners in Lunacy, one of the blackest patches on the map of England.

As it has been stated that vascular degeneration appears to be the chief factor in hastening the progress of cerebral dissolution, it may be thought difficult to reconcile the fact of the relatively greater prevalence of drunkenness in the county of Lancaster with that of the lesser proportion of cases belonging to Groups IV and V at Rainhill as compared with Claybury. It is, however, only reasonable to suppose that vascular degeneration, incited by such an extraneous cause as alcoholic excess, and occurring at a comparatively early age, would have less influence in hastening the progress of cerebral dissolution than would the gross vascular degeneration which is so commonly

associated with senility, and which is only one of the many evidences of wearing out of the whole bodily tissues, including the brain. As has been shown, it is the class of case with the atheroma of senility which appears to have been admitted with less frequency at Rainhill than at Claybury.

### *General Conclusion.*

Many of the points which have been touched upon in this paper have previously been dealt with by Bolton, from both clinical and pathological aspects, and any reader interested in the subject may be referred to his published work for further details.

Consideration of the weights of the cerebral hemispheres in their respective groups, whether derived from Claybury or from Rainhill, have led to the same conclusion—a conclusion which has been strengthened by the investigation of the convolitional pattern of the Rainhill cerebra. I wish to especially emphasise the fact that this inference can be drawn very largely from a consideration of intracranial appearances alone.

A general conclusion, the result of a study of the cases in this series—a series from which, it should be remembered, all cases of idiocy, imbecility, epilepsy, general paralysis, and gross cerebral lesion are excluded—is, that all cases of “mental disease” may, on the data furnished by intracranial appearances, be divided into two main classes. Cases with cerebra which are developmentally deficient in weight and in convolitional complexity, and which are frequently characterised by the presence of an unusual number of other stigmata, but which exhibit no, or only slight, intracranial morbid appearances, and are hence not prone to cerebral dissolution. These manifestations of cerebral subevolution, therefore, suggest that such cases should be regarded clinically as examples of amentia in contra-distinction to the second class of case, which possessed cerebra of originally greater weight and more highly evolved convolitional pattern; in the latter class of case the cerebrum has undergone dissolution to a more or less extent, and such cases should presumably therefore be looked upon clinically as cases of dementia.

Lest it should be objected that there is a certain recovery rate amongst the insane, and that cases of recovery do not come

under either of the above described classes, it may be remarked that cases of mental disease which recover may be roughly divided into two clinical types: (1) Cases suffering from a first attack, and liable at any period to a second attack, and cases of relapsing insanity; (2) cases of obvious cerebral toxæmia—from whatever cause, but often primarily at least, incited by alcoholic excess—in which affection of the cortical neurons has not been sufficiently intense to prevent recovery from taking place. Clinical evidence indicates that numbers of the first type of case, which died from some intercurrent illness, are included in Groups I and II, and to a less extent in the later groups; and as regards the second type of case, a certain number of recent confusional cases exist in the earlier groups, and numerous examples of a more severe, but otherwise similar type, in which recovery has not taken place, occur in the later groups. The present series of cases may therefore be regarded as being typical of "mental disease" as a whole.

My main object in undertaking this investigation was to determine whether the conclusions arrived at concerning the Claybury Asylum series of cases would find their counterpart in the series obtained from Rainhill. Whilst the conclusions drawn from a study of the material derived from these two institutions are generally identical, it has been found that certain local differences exist, particularly with regard to the weight of the brain, to the proportion of cases which should be assigned to the respective groups and to the prevalence of degeneration of the cerebral vessels. In view of these local differences it is, perhaps, not too much to suggest that statistics similar to those which have just been under consideration, and prepared by independent workers in different asylums, would lead to the acquisition of interesting and valuable information. By some, also, the whole matter may seem in need of further inquiry, for a survey of the text-books and monographs which have been published in recent years on the subject of mental disease would almost lead one to suppose that relatively little importance can be attached to intracranial appearances, and that no special relationship exists between the clinical phenomena of mental disease and the subevolutory manifestations or dissolatory changes found inside the cranium after death.

(1) The references to Bolton's papers dealing with the subject are: (1) *Arch. of Neurol.*, vol. ii, 1903; (2) *Brain*, part cii, 1903; (3) *Journ. of Ment. Sci.*, April,

1905, and April, 1906.—<sup>(2)</sup> *Journ. of the Scientific Soc. of Saxony*, vol. xxvii, p. 389; abstract in *Centralb. f. die Physiol.*, 1902, p. 294.—<sup>(3)</sup> The above data are quoted in *Quain's Anatomy*, vol. iii, part i.—<sup>(4)</sup> See *Arch. of Neurol.*, vol. ii, p. 438, and *Journ. of Ment. Sci.*, April, 1905, p. 20.

*The Care and Training of the Feeble-minded.*<sup>(1)</sup> By  
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FROM the earliest ages in the history of man, we find evidences of the existence of beings stunted in body and defective in mind, whose relations with their fellows varied through the centuries. At one epoch they were exalted almost to the level of a deity, and their symptoms were interpreted as manifestations of Divine will. At another they were looked upon with loathing and disgust, not unmingled with fear. Still later, they were either the playthings of kings or the victims of cruel jibe and blow, and their existence at the present day, and the associated conditions of insanity, crime and intemperance, constitute one of the most serious, if not the most serious problem which a civilised community is called upon to solve.

To Itard, of the Bicetre, belongs the honour for all time of being the first to recognise the condition of the imbecile and to take steps for his amelioration. The first idiot to be scientifically treated was the so-called "Savage of Aveyron" in 1801; this story is too familiar to need repetition here. Guggenbuhl, in Switzerland, began to study cretinism in 1839, and opened a school on the Abendberg in 1842 simultaneously with Saegert, who did the same in Berlin. In 1846, Kern established a school at Leipzig. In 1842, the Eastern Counties' Asylum at Colchester was opened. Scotland followed with her first institution in 1852, and in 1853, the foundation stone of the Earlswood Asylum was laid. The first American institution for the idiot was opened in 1846. It is worthy of note that the movement for the amelioration of the condition of the imbecile was solely the result of private charitable enterprise, absolutely unaided by the legislature. The untiring efforts and the able advocacy of the elder Seguin, first in Paris, and afterwards in America, of Conolly, Andrew Reed, and our own Dr. de Vitre in this country, gave the movement a tremendous impetus. Institutions at



Bath, Earlswood, Colchester, and later on at Exeter, Birmingham and Lancaster opened their doors, and money was subscribed lavishly to enable this good work to go on. Thus commenced the mighty undertaking which has since undergone such vast development throughout the United Kingdom, and particularly in America. The primary object aimed at in the early days of the work was the education of these children, in fact to fit them as far as possible for the duties and enjoyments of life. With the boundless enthusiasm of workers in new fields, those pioneers obtained brilliant results in many cases, and the possibilities of the education of the idiot were somewhat over-estimated. Whilst a few boys and girls were educated to such a degree as to enable them to read and write, the majority, alas, were found to be incapable of learning, chiefly because of their lack of the faculty of attention. Again, those who had been educated were found to be severely handicapped by the lack of sufficient mental balance to carry them along in the absence of control. As long as individuals of this kind remained within the walls of the institution, all went well, but when their term of training was completed, and as soon as they attempted to take their places in the outside world, very few became useful members of society. Those who did succeed were invariably possessed of relatives or friends, under whose ægis they were protected and encouraged. Nowadays it is the care and protection of these children which ought to be our premier consideration ; without this, attempts at education are little better than waste of time. In the first place, such custody provides them with the proper hygienic surroundings, which are practically only found in our public institutions. Few indeed of these children possess a perfectly normal physique, their faulty organisation is easily thrown out of gear, and when this occurs, it is at once reflected in the mental state of the individual. Thus before the boy or girl can be expected to benefit from efforts made to educate them, it is absolutely necessary that they should be maintained in a condition of health as near to the normal as their defective constitutions will permit, and with this object, constant and careful medical supervision is of the utmost importance. How many are the physical shortcomings in the patient which escape all eyes but those of the educated physician is only known to those who have experience in institutions of the kind. Occasional stupidity, which is too often



attributed to their mental state alone, may be the result of temporary depression of the general health, or of defects of vision and hearing, by which the sensorium is deprived of normal educational stimuli. Along with efficient medical care, there is another factor which operates powerfully in the well-being of the feeble-minded, and that is the general environment provided by residence in a well-regulated institution. Isolation is characteristic of the imbecile, and is brought about by his inability to be a partaker in the ordinary daily routine of persons of normal intellect. This deficiency is, beyond doubt, acutely felt by the individuals of the higher grades of defectives ; it causes them to shrink into themselves, and to avoid the intercourse of their fellows, for the simple reason that they are acutely conscious of the depressing influence of their own lack of capacity, which is being continually demonstrated to them by unfavourable comparison. The remedy for this is obviously the removal of the individual into the society of his peers, which immediately provides to the minds of those who are not quite impervious to impressions, the healthy stimulus of rivalry existing among the members of a community endowed with more or less equal gifts. The stimulus to the moral senses afforded by the commendation elicited by correct behaviour, the increased diligence resulting from judicious rewards and encouragement, all create a higher form of morality, the attributes of which are industry, honesty, and self-respect, and it is to the attainment of this object that the Royal Albert Institution has for over forty years striven with constant earnestness of purpose to accomplish. But what are the advantages to be gained by the residence of one of these feeble-minded children in a special institution ? These are to be found in the application of the simpler amenities, obligations, and observances which ordinarily hold in a normal community ; this tends to transform the institution into a little world of its own for the less afflicted inmates, where the usual sombre panoply and insignia of detention do not exist, but where loss of prestige overtakes the individual who offends against his fellows, or commits an infraction of the "law," and it is surprising to see how great a part the desire to stand well in the eyes of others plays, even in a colony of the mentally defective. Here, beyond the deprivation of an entertainment or a religious service, there are no punishments ; a constant

gentle, yet firm system of discipline, together with the example of obedience shown by others, is sufficient to ensure amenability, and in time even the most disorderly child is sure to be subjugated. It is when away from this influence that deterioration commences, and is often noticed by parents who have their boy or girl home for a holiday—indeed, it is not uncommon for some of them to ask for the child to return to the institution after ten days or a fortnight's absence, as they are quite unable to exercise proper control. Contact with the outside world we find does not tend to improve those of our patients who are without relatives or friends to guide them; they are unfortunately readily responsive to evil influences, and less likely to adhere to a strictly moral line of conduct. Although surprisingly few get into actual trouble, under stress of circumstances they find it difficult to steer an absolutely straight course. Dealing with the subject of training and education, I am of opinion that to expect systematic improvement from any but the highest grade imbeciles, merely from three or four hours a day in a school, apart from care out of school hours, is somewhat unreasonable. The patient housed in a properly managed institution is learning a very great deal out of school—his faulty habits are corrected, his manners improved, he is being taught to eat his food decently, and in a great number of cases some rudiments at least of personal cleanliness are being instilled into him. Even in the matter of play hours, his recreation is so directed that he derives the maximum amount of benefit from it. I am afraid this is where the special schools will be found wanting, as the children are only under the eye of the teachers for a limited time, and at home the amount of supervision necessary is often lacking. Many of them come from poor, squalid, and often dirty homes, where the defects of the parents themselves preclude the possibility of adequate oversight. It is therefore obvious that the risk of losing any benefit they may have gained in school is very great. Again, this imperfect system of instruction is only operative up to the age of sixteen, a time which is undoubtedly the most critical in their life history, both for themselves and particularly in the case of the girls for the next and succeeding generations. It is the child who, only slightly defective, may, as the result of education, acquire a superficial veneer allowing of a return to the community, and who constitutes thereto a very grave

danger. The feeble-minded child is rarely an accident, and in the great majority of cases the causes at work can be traced in the parents themselves. Unfortunately, in the existing state of the law, should we segregate all those who at present are generally returned as possessing some grade of mental defect, we have practically left untouched the whole breeding-ground in which defectiveness has its origin. With reference to the education of the patients here, and in similar institutions, let us first consider the teachers. A few years ago, the schools were conducted by some half dozen highly certificated, and at the same time, highly paid teachers. After considerable experience of these ladies, we came to the conclusion that the work could be more efficiently performed by intelligent nurses, with, of course, an experienced school-mistress at their head, and we have since found that our conclusions were well founded, namely, that the men and the women who had experience of the patients in the wards of the Institution were the most successful instructors. As attendants and nurses they gained information as to the physical condition of the imbecile, his idiosyncrasies as to food, peculiarities of temper, his varying moods, sympathies and antipathies, and have learned tact and patience, without which their efforts would be of but little avail. Next, what is the best system to adopt? Surely that having for its end some really material object, which ought to be the provision of a simple elementary education, which not only can be easily assimilated, but also used to practical advantage. The time is wasted which is spent on the cultivation of one faculty alone, and it is a matter of common knowledge that this abnormal development is constantly associated with other defective intellectual and moral senses—the brilliant performer of difficult classical music who is deficient in other respects, mentally and morally, is no longer hailed as a desirable. Sometimes we find that certain patients can never make appreciable progress in school, and time spent there in the listless contemplation of a blackboard is lost; some of those who fail in ordinary book-learning may do fairly well in the workshops. Industrial training may with advantage go hand in hand with scholastic instruction, but in no case should an inmate continue in school, however young, who is able to read and write; his place is on the industrial list learning a trade.

The elements of several of the industrial occupations could well be taught in school, as is done here, leaving the corresponding workshops available for the more advanced pupils. Nothing is better suited for the lower grade patients than simple outdoor work in the gardens and grounds. With the limited time at our disposal to-day, perhaps the best way of describing the mode of education and training would be to begin by giving a brief account of the career of the patient from the time of his admission to the Institution. His first experience is a fourteen days' sojourn in the reception house, apart from the main building and the other patients. This is necessary for two reasons, one being that a most important safeguard is thus provided by an isolation department in the event of infectious disease occurring among the newcomers. The other object fulfilled by this short term of segregation is the facility it offers for observation and diagnosis. This is extremely valuable, and enables a tolerably correct classification to be made, and the proper department selected for each particular case. "Home sickness," which is never very severe, is soon vanquished by the attention and kindness of experienced nurses before the boy or girl enters (to them) the greater world of the Institution. Next come interviews with the heads of the school staff, who, in the course of a short examination, soon find out the capabilities of each, after which they are admitted to classes suited to their attainments. Here the course first pursued is a system having for its object the cultivation of the senses, the perfecting of muscular co-ordination in movement, and the establishment of the normal relation between the brain and hand. To secure this end, exercises are useful, and of these the "bean bag" and simple musical drill are examples ; by their help progress, more or less, is made with the dull and apathetic. For others who are possessed of superfluous and misdirected nervous energy, as evinced by irregular and involuntary movements, the use of the "peg board" or kindergarten "picture perforating" is beneficial, and the stereognostic sense is developed and strengthened by the employment of "size" and "form" boards. Taste and smell are not, as a rule, deficient, and may be tested by interrogating the patient on substances similar in appearance but differing in taste and odour. A child may be congenitally deaf as part of his developmental failure, or the apparent defect in hearing may result from mere



inattentiveness; an attempt may be made to deal with the latter by the aid of musical sounds varying in tone and pitch. Defects in speech, when profound or dependent on certain causes, are seldom eradicated; special speaking lessons often benefit those in whom the defect is but slightly marked. These form a somewhat necessary introduction to the more serious problems, the learning to read and write, but many patients are of course never able to get so far. For the lower grade cases, all that can be effected is to provide them with comfortable home-like surroundings and medical care, for they all labour under more or less constitutional weakness. Reading and writing are best approached in the first instance by means of the "word method" and the "letter box." Arithmetic is invariably a difficult matter to the feeble-minded; many special aids are employed, and it is altogether the exception to come across a feeble-minded child who has any idea of number in the abstract. The "shop lesson" is most valuable in conveying simple impressions of counting, value of money, etc. Perhaps the most interesting part of the Institution to the ordinary visitor is the Herbert Storey Industrial School and Workshops. Here is carried on a system of manual training which tends to secure the best results from the boys. It is not proposed to give a detailed account of the methods employed in the limited compass of this paper, and a short description of the trades taught must suffice. In the first place comes carpentry. In it, new pupils commence their instruction by learning to make ordinary boxes, ascending by gradual stages to more ambitious efforts. Quite a considerable number of articles of furniture used in the Institution are made here by patients who, under supervision, are fairly competent joiners. Another interesting craft is that of wood-carving, and in this some patients are quite skilful. The instructor in this department is himself an old patient, who was admitted at an early age. As he showed a distinct aptitude for carpentry, he passed through its different grades with considerable credit. A few years ago he turned his attention to woodcarving in which he has been singularly successful; handicapped as he is by athetosis, he has executed some beautiful work, notably one panel which was presented to the late Bishop of Carlisle. When the last wood-carver instructor left to better his position, this lad begged to be



allowed to take his place. After some consideration it was decided to give him a trial, which proved so satisfactory that he was over two years ago confirmed in his appointment. The boys under him have made good progress, and in addition to wood-carving, he teaches a class in elementary joinery. In the shoe-maker's shop, are to be found boys who have commenced from learning to stitch, and who are now able to make boots and shoes throughout. Some of these have gained prizes at exhibitions where there have been separate divisions for the work of the inmates of this and other kindred institutions. Basket-making is peculiarly adapted as an industry for many feeble-minded patients, and here its adoption has been attended by surprisingly good results. Book-binding is also taught; magazines are bound, and repairs effected when necessary to the volumes composing the Staff Library. In the printer's shop patients are employed in setting up the type in connection with work of this kind for the offices of the administrative and secretarial departments, and all programmes of the entertainments are printed here. In the tailor's shop much good work is done, and a boy was recently discharged at the request of his mother, who had found work for him; he had improved to such an extent as to be able to make unaided a suit of clothes throughout. I wish I could say that he is doing well, but I cannot—shortly after leaving us he threw up his work, assaulted his mother, and went on tramp. In addition to the above are two other shops, one of which is devoted to the teaching of mat and brush-making, and many of the articles made there by the patients are used throughout the Establishment; in the other is taught sash-cord making, and simple upholstery. The Institution possesses an estate of 185 acres, on which are two farms. At the home farm-house, there is accommodation for twelve sturdy lads, who assist in general work, tending the stock, and are useful helpers in the fields. Much interest is shown during the hay harvest, when the boys are quite as keen on getting in the crop as the ordinary farm hands. It is impossible to conclude this paper without a brief glance at the ætiological factors in operation. These are many and various, and it is extremely difficult to obtain a family history which is at all reliable. As is well known, the majority of people regard the existence of insanity or other mental

abnormality, epilepsy, alcoholism, etc., in the family as a stigma and disgrace, and will deliberately lie in order to conceal it. Yet, when one does get at the real state of affairs, as one frequently can by persistence and much asking, it is surprising to find the number of cases which can be clearly traced to hereditary predisposition. As I have already hinted, from the most superficial observation of many of the parents and relatives of the feeble-minded, the source of the defect cannot escape notice—it literally stares one in the face. Finally, we are confronted with a momentous question which is impossible to evade—besides training and educating these obviously defective children, are we doing anything for future generations? We are not. Speaking for the voluntary institutions, who are the pioneers in the work, we are accomplishing the task which was begun a century ago, and if we have not gone further, it is because this is beyond our strength and resources. Segregation for life of those bearing the obvious stigmata of defectiveness will do something to limit the number of these children in future, and restriction of marriage to those of healthy inheritance would quickly do away with its occurrence. Unfortunately, public opinion must advance greatly before this is possible; something, perhaps, may be done in our continuation schools towards the teaching of the principles of eugenics. At any rate, I live in hope that, in the words of the founder of this science, “it is quite conceivable that a non-eugenic marriage should hereafter excite no less loathing than that of a brother and sister would do now.”

(<sup>1</sup>) A paper read at the meeting of the Northern and Midland Division, held at the Royal Albert Institution, Lancaster, on October 21st, 1909.

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*Lunacy Administration in Cape Colony.*(<sup>1</sup>) By T. DUNCAN GREENLEES, M.D.Edin.

THE subject of lunacy administration in our Colonies, and in other countries, is one not so well known as it should be to those of us who are specially interested in these matters in this country, and I was pleased to see recently articles in our Journal by Drs. Eric Sinclair and Beattie Smith treating of this subject as found in Australia. If our Editors published a

series of articles referring to lunacy administration, as met with in our Colonies and foreign countries, these might prove useful when our own Lunacy Act undergoes amendment.

Having spent seventeen years as medical officer to a Colonial asylum, I have thought myself competent to submit the following brief *resumé* of what has been done in Cape Colony to improve the condition of the insane, and the administration of the asylums, during the last twenty years.

*General historical facts.*—Most of you are aware that in 1872 the Colony, which previously had been directly governed by the Crown, was given responsible government. The granting of responsible government has enabled its legislators to enact laws which, while suited to local requirements, are in many respects well abreast of the times. Many of the Acts, for example, which form the Statute Book of Cape Colony, are founded upon the legislation which other countries and colonies have proved useful in their experience, and thus our younger Colonies are beginning, as it were, where older countries with their conservative habits leave off.

In 1872 the only asylum for the insane in Cape Colony was on Robben Island—a desert isle eight miles from the mainland—and which also provided accommodation for lepers, paupers, and criminals. There was no Act dealing specially with the insane, and the ultimate detention of any case depended upon the decision of a medical board which occasionally met in Cape Town.

In 1875 an Act was passed, but under its provisions it was necessary that the person of unsound mind should first be indicted as a criminal before he could be treated as a lunatic! Of course the law was made very elastic, and there was seldom found difficulty in finding some act of the lunatic which could be interpreted as “criminal,” and thereby justify the detention of the person.

But even in these early days it was recognised that in some cases it was not deemed prudent that patients should be first criminals before they became legally lunatics, and the Government, with no legal powers whatever, enacted that in certain cases the Colonial Secretary might issue authority for detention in an asylum for treatment. Fortunately for the cause of lunacy in the Colony, this ruling was questioned; a lady, detained in one of the asylums by order of the Colonial

Secretary, prosecuted the Government for illegal detention, and the judge, in ordering her immediate discharge, made some very severe remarks about any department of the Government taking upon itself such powers as were not conferred upon them by Act of Parliament.

This was in 1890, and the Government, threatened with innumerable law suits for illegal detention, was forced to introduce a Lunacy Bill, which was passed and became law in 1891.

Shortly prior to this, *viz.*, in 1889, an agitation was made to house the better class of the insane on Robben Island on the mainland, and monetary provision was made by Parliament for the erection of a new asylum in the immediate vicinity of Cape Town, on property already belonging to the Government. At the same time the necessity for technical advice in lunacy matters made itself keenly felt by a country awakening to the sense of its State responsibility in the care of the insane, and Dr. W. J. Dodds, of Montrose Asylum, was appointed the Government adviser and inspector of their asylums.

Dr. Dodds, on his arrival in July, 1889, immediately set about effecting improvements, both structural and administrative, in the asylums under his care; new rules and regulations were drafted and adopted, and soon he saw a modern asylum erected in the neighbourhood of Cape Town, designed by a distinguished architect from his own ideas, and thence a number of the quieter cases from Robben Island were transferred and cared for in accordance with modern methods.

The Lunacy Act of 1891 was an immense advance on what had previously existed, but experience in its working proved it had many defects, especially in a country where the distances are so great that it sometimes happened certificates, signed at a patient's house, became invalid before the patient could reach the asylum.

Accordingly, in 1897 an amendment to this Act was passed by Parliament, in which many of the defects of the previous enactment were removed, with the result that for its simplicity and ease of working—for I presume the doctors had had more to do with its drafting than lawyers—I have little hesitation in saying it will compare favourably with any Lunacy Act in existence. So near perfection is it that, at a meeting of medical superintendents of Colonial asylums, held in Grahamstown



several years ago, with a Government instruction to "consider lunacy legislation with the view to further amendments of the Act," they expressed themselves as unable to offer any such criticism as would justify their advising the Government to amend it.

Briefly, it may be stated that lunatics in Cape Colony before 1891 were simply legally "criminal or dangerous persons"; after the passing of the Act of 1891 they were classified into "criminal, dangerous, and other cases"—the "other cases" being those who could not be dealt with under the criminal law, but for whom treatment in an asylum was deemed advisable; and finally, under the Act of 1897 the insane were simply divided into "criminal and others."

The Act of 1897, which was promulgated on May 25th, 1897, is divided into five parts, comprising seventy-eight sections, and it may be of interest to refer briefly to its various provisions.

#### PART I.

Part I of the Act deals with lunatics who are not criminal, and is that portion most used in dealing with the insane in the Colonial asylums. Under its provisions a magistrate—and a Colonial magistrate is a paid Government official—after satisfying himself as to the insanity of a person from evidence on oath, and two medical certificates, may order the detention of an alleged lunatic for a period not exceeding one month. Thereafter the further detention can only be granted, after submission of all documents and a medical certificate by the medical man in charge of the patient, on the order of a judge.

A judge has great discretionary powers, for, under Section 15, he may either—

(1) Make a further order for the detention of the alleged lunatic *sine die*, or for such period as he deems necessary.

(2) Order a summons to be issued on the alleged lunatic to appear before him.

(3) Appoint a *curator bonis* for the care of the lunatic's property, authorising him to disburse necessary monies out of the lunatic's estate, and to submit a financial statement to the Court from time to time.



(4) Direct that the alleged lunatic be discharged forthwith.

(5) In cases where the lunatic is a poor man the judge may order that the legal expenses be free of cost to the lunatic's estate.

(6) Generally give such directions as may appear to him necessary and proper.

Under Section 13 the Crown solicitor, whether he is the Attorney-General, with jurisdiction over the Western Province, the Solicitor-General, over the Eastern Province, or the Crown Prosecutor, over West Griqualand, acts *ex officio* as the *curator ad litem* of all lunatics within their respective districts, and exercises a general judicial supervision over the interests of their clients.

It will thus be seen that, under Part I of this Act, the authority of the magistrate for the detention of a lunatic lasts only for one month, while the final disposal of the patient and his estate rests entirely with the judge, who has practically unlimited powers to "do anything he may consider necessary and proper" in the interests of the patient, ordering him to an asylum from "single care" or *vice-versâ*; ordering periodical reports as to his mental or physical condition; making permanent or temporary orders for his detention; ordering the disposal of his property; or he may declare null and void the existing certificates, and order the lunatic to be re-certified.

Further, under Section 17, any person detained under the provisions of this Act may apply to the Court for an inquiry into the cause and grounds of his detention, and the official *curator ad litem* is compelled to undertake the duty of submitting such application to the Court, gratuitously in the case of paupers.

Section 18 provides for the issue of a warrant of transfer by the Colonial Secretary of any lunatic committed by a summary reception order of a magistrate or by an order of a judge from an asylum, hospital, or gaol to another "safe place of confinement."

## PART II.

Part II of the Act provides for the disposal of Governor's pleasure and criminal lunatics. Governor's pleasure cases are those criminals found insane prior to arraignment, and these

cases may be detained in custody during the pleasure of the Governor of the Colony. At the trial, in certain cases, the magistrate or judge, as the case may be, may abandon the criminal charge, and then the lunatic may be dealt with under Part I of the Act as "an ordinary case"; and when the charge is a trivial one this procedure is usually carried out.

When a prisoner becomes insane he has to be "certified" by two medical men, and thereafter he is dealt with as a criminal lunatic, and detained either in the only criminal asylum in the Colony, Robben Island, or failing room there, in the prison. Should such a person recover his reason, formerly he was sent back to the prison to complete his sentence, but now the time of his detention counts in the period of his punishment; should he not be fit for discharge at the termination of his sentence he may be discharged *pro forma* as a criminal, and thereafter be considered an ordinary lunatic as if admitted under Part I of the Act.

The Governor of the Colony reserves to himself the right to discharge, conditionally or unconditionally, any Governor's pleasure or criminal lunatic; such power, it need hardly be said, is never used unless on the advice of his Ministers.

### PART III.

This part of the Act provides for the care and administration of the lunatic's property; under it the Court may appoint a curator of the estate; it may also appoint a curator of the person of the lunatic. Both posts may be given to one person, but this is rare; as a rule the medical attendant is appointed curator of the person, and an attorney, or other business man, curator of the estate. In certain cases it is advisable to make only one appointment, and then it is generally the estate that is supervised, the lunatic being at liberty.

Further, the Court may dissolve a partnership, one member of which is declared of unsound mind.

The appointment of a curator to a lunatic's property is most carefully safeguarded in the interests of the lunatic; the curator is subject to the master of the Supreme Court, to whom he files an inventory of the estate, reports details of his disbursements from time to time, and submits to his decision as regards his own remuneration for his services, such being usually 5 *per cent.*

of all monies expended out of the estate. His powers of expenditure are limited and confined to the instructions of the Court.

It will thus be seen that the financial interests of any person declared of unsound mind are most carefully supervised, and I have personal knowledge of the great care that is exercised in the administration of the estates of patients under my care in Grahamstown Asylum.

#### PART IV.

Part IV deals with offences and penalties under the Act, and I may here say the provisions are as stringent as they are under the English Lunacy Act.

For the illegal detention of an alleged lunatic the penalty must not exceed £50, and for wilfully making any mis-statement the limit is £100. The same penalty is meted out for obstructing anyone, under Government authority, in the exercise of such powers as are given them under this Act.

Contravening the provisions of the Act or any of its regulations involves a fine not exceeding £20 ; the same fine may be inflicted—or, failing a fine, imprisonment not exceeding three months—for ill-treating a lunatic, or conniving at his escape, by an asylum official.

Carnal knowledge of a female lunatic by any person in charge entails, upon conviction, imprisonment, with or without hard labour, for a period not exceeding five years.

#### PART V.

This part of the Act deals more especially with matters arising out of the other sections. In it provision is made for dealing with lunatics from other States or from across the seas, to prevent dumping ; and Sections 52, 53 and 54 refer to the regulations of licenced houses and "single care" cases. There is only one licenced house in Cape Colony at the present time.

Section 58 treats of voluntary boarders, who can be admitted to an asylum voluntarily on application to the medical superintendent, such admission being duly reported to the Colonial Secretary. There is no need there, as exists here, for official consent to be previously granted before a

person can voluntarily place himself under treatment. Otherwise the regulations, pertaining to voluntary boarders in the Colony, are similar to those met with under the English Lunacy Act.

Section 75 provides for the Governor reserving to himself the right to issue rules and regulations for the better working of the Act; such rules deal with the procedure in the admission, discharge, or transfer of lunatics, the guidance of asylum visitors, the necessary books to be kept, financial and other reports, paying patients, etc.

Perhaps the most interesting portion of this part of the Act is Sections 76 and 77, which refer, all too briefly, to the legal custody of imbecile and idiot children, for whom, on my representation, separate accommodation was provided in connection with Grahamstown Asylum, and the Institute for Imbecile Children is the only institution specially devoted to the care and education of such cases in Africa at the present time. I understand, however, that Natal is urging the provision of similar accommodation in connection with one of its hospitals.

Such, then, is the Act under which the insane of Cape Colony are cared for, and their estates supervised; its analysis shows it to be better in many respects than our own Lunacy Act, the final disposal of a person, whereby he is deprived of his personal liberty, being an extremely important point.

It would seem to me that if any person requires to be deprived of his liberty, whether on account of some crime he has committed, or on account of mental disease, the proper tribunal before which he should appear, whether in person or by representative, is a court of justice, and the proper person to deprive him of his liberty is a judge. The exception is made of the lunatic who is unfortunately situated, for his sentence is pronounced by admittedly incompetent authorities, for so the "great unpaid" justices of this country are said to be.

Then, again, how is it that restraint and seclusion can be carried out to an unlimited extent in a general hospital on a "borderland case," without the legal formalities necessary when the case is a certified one? Does "certification" imply insanity, and is the strict line of separation between "borderland" and "insanity" bridged over by the mere act of filling up certain legal documents?



Surely if insanity is a disease, and if it is considered that an Act of Parliament is required for its treatment, then the Act should be made as simple as possible, its sole object being the early treatment of the insane, and if detention is necessary, the same justice as is meted out to the ordinary criminal should be given the lunatic, and a judge, and a judge alone, should have the power to deprive even an insane man of his liberty.

But I digress; I merely submit these thoughts for your consideration.

*The Asylum Service of Cape Colony.*—The public asylums in Cape Colony, like similar institutions in all the British Colonies, and some foreign countries, are State institutions, supported out of public funds, and the officials are civil servants, subjected to all the rules and regulations that govern public servants.

A civil servant so soon as he joins the service is compelled to contribute to two pension funds, a general fund for his own pension, and a widows' fund; and he may retire at sixty years of age, drawing, as a retiring allowance, one-sixtieth of his annual salary and allowances for each year of service, the amount being calculated on the average emoluments of the last three years of his service.

This scale is, upon the whole, a liberal one for the ordinary civil servant, who joins when he is seventeen years of age, and whose office hours are from nine until four; but it is different with asylum officials, such as medical officers, who are appointed only after having had their training. These men are rarely appointed before the age of thirty, and accordingly have already lost thirteen years' service for pension purposes.

In view of this anomaly, and to bring the question of pensions, as they affect asylum employees, directly under the notice of the Government, a meeting of asylum medical officers was held, and a scheme drafted enabling asylum officials to retire at fifty, after fifteen years' service, and at fifty-five for certain others of the staff, with ten years added to their service.

Fortunately, just at that time a Commission was sitting to consider generally the Civil Service, for there were many injustices requiring amendment, and Dr. Dodds and I were enabled to lay before them the claims of asylum officers for



more liberal terms as regards pensions, etc., than were already provided for by the Civil Service Act.

As a result the Commission recommended that officials in the asylum service should be allowed to retire on pension after fifteen years' service, being fifty years of age, such pension not to exceed one-half of the salary, if the usual calculation on the Civil Service scale did not amount to this ; otherwise the pension would be in accordance with the ordinary scale of the service. These terms were on a more liberal scale than those submitted by us.

A Bill was drafted to give effect to the Commissioners' recommendations, but it never got so far as Parliament, owing to a political crisis occurring at the psychological moment ! There is no doubt, however, that the next amendment of the Civil Service Act will embody most, if not all, of the recommendations of the Commissioners, and, in the meantime, an assurance was given us that their recommendations would have effect in any case submitted.

*Mental Nursing in Cape Colony.*—Previous to 1890 nothing in the way of training was even thought of in the asylums of Cape Colony, although before this date the hospital nurse was thoroughly trained, and a register was kept of all hospital-trained nurses. But with respect to the asylums, nurses and attendants were simply pitchforked into their respective wards without any previous knowledge of their duties. And even in England the training of asylum nurses was only taken up seriously three years before this, although in many individual cases training was, for long before this time, carried out. So recently as in 1887 I heard a distinguished asylum superintendent deprecate educating asylum nurses lest they should get to know too much, and thus undertake duties that rightly belonged to the medical officer ! I am glad to say this gentleman has long since seen the error of his ways, and has become a powerful advocate in promoting this good work.

All praise to our Association for inaugurating the systematic training of mental nurses, and for putting it on a firm basis.

There was much pioneer work to be done in this direction when I first went out to the Colony in 1890. That year I established a course of training, and became associated with the Medico-Psychological Association in its training and examinations, and, in time, a number of my nursing staff were

awarded the coveted honour of the medal and certificate of the Association.

The other Colonial asylums took up this work with enthusiasm, and ever since candidates are regularly presented for this examination.

The Government, recognising the importance of improving the education, and hence the nursing, of its asylum employees, was pleased to grant increased emoluments to those who had been successful in these examinations, and thus an increased incentive was given to us all, and the general tone and *esprit de corps* were materially improved thereby.

Not satisfied with this, and noting the agitation in England for the registration of nurses, and especially the registration of mental nurses as carried on by this Association for many years now, Dr. Dodds and I consulted together, and submitted a memorandum to the Colonial Medical Council, who control the register for hospital nurses. On our recommendation the Council established a register for mental nurses; candidates for inclusion in this register have to pass either the Medico-Psychological examination in mental nursing, or an examination, held by the Council itself, on similar lines. Thus the Colonial mental nurse is now on the same legal level as her sister in the general hospitals of the Colony, a state of affairs not yet attained to in this country.

Before this system of self-help was inaugurated great difficulty was experienced in getting vacancies filled up, and we were glad enough to import our nurses from time to time. Now all this is changed, and the colony, in this respect, is practically self-supporting.

All the credit of these improvements, and I could mention many more did time permit, carried out within the past twenty years, is due chiefly to Dr. Dodds, the Inspector of Asylums, who, by his indefatigable energy, enthusiasm in his work, and powerful influence has advanced everything that pertains to the increased comfort and happiness of the insane and those having charge of them. Indeed, under him the Colony has done more in this short space of time for the insane than England in the last generation. England, with her conservative habits, no doubt "hastens slowly"—which, by the way, is our Colonial motto; but she should take care lest, in the race of civilisation, she is left behind by her own children—her colonies. Already

in asylum administration and lunacy legislation she would do well to take a lesson.

*The future of lunacy in South Africa.*—What the history of lunacy administration will be under the new Union of the States of South Africa it is difficult to say, but I would prophesy, if she is left alone to work out her own salvation, progress in every direction on the lines carried out in recent years in Cape Colony.

The central asylum administration will have under its control eight asylums and two hospitals where lunatics are received, and from 3,000 to 4,000 certified patients, together with a staff of about 400 individuals, an annual expenditure for maintenance of £200,000, and possibly £100,000 for additions and repairs. This is a heavy burden for a country to support whose population is well under 1,000,000 white persons—the coloured people rarely count for taxation purposes.

The retention of an asylum inspector, untrammelled by other duties, is absolutely necessary. Such an officer should have the ear of his political chief, and be the adviser of the Union Government in all matters pertaining to the asylums under his jurisdiction.

He should be empowered to authorise the expenditure of any monies required to carry out his recommendations, otherwise he is the mere shuttle-cock between the Government and the various asylums.

If the two white races unite on these lines there is a bright future for lunacy in South Africa. It will be watched by those of us interested in the care of the insane throughout the world, and the time may come when this country, at present tied down by its conservative habits and laws, will not be ashamed to imitate, in this direction, this, its youngest of her dominions beyond the seas.

(<sup>1</sup>) A paper read at the Autumn Meeting of the South-Eastern Division, held at Brooke House, October, 1909.

*The Significance of Heredity and the Neuro-insane Constitution as Important Factors in the Production of Mental Disease, with an Examination into the History of 100 Consecutive Cases.* By G. RUTHERFORD JEFFREY, M.D.Glasg., M.R.C.P.Edin., Senior Assistant Physician, Crichton Royal Institution, Dumfries; late Senior Assistant Physician, District Asylum, Ayr.

FROM the earliest times in the history of medicine probably no subject has been more thought about, no subject more frequently attacked, than that of heredity, and it is therefore not without a certain amount of hesitation that that all-important subject is brought into consideration in such an article as this.

At the very commencement of the study of medicine the attention of the student is soon directed towards heredity, although it is not to the student of medicine alone that this subject is of interest. To the every-day individual, layman and professional man alike, it is a subject that is constantly demanding attention. In the animal kingdom its importance seems never for a moment to be doubted, whilst in the breeding of animals its significance stands unchallenged. For example, by careful selection and mating of animals, special breeds are procured—in horses, speed, endurance, and strength can be obtained, in cattle the size and dairy qualities of the animal, in sheep the quality of the wool, these being only a few examples of what can be attained by taking into consideration the parentage, or, in other words, recognising the importance of heredity.

Among the ancients the principles of heredity must have been recognised, and undoubtedly gave rise to certain family names among the Romans, as, *e.g.*, the Nasones, Capitones, etc., whilst, coming to more recent times, such an expression as the "Bourbon nose" is sufficient to show that it is a characteristic which has been handed down from one generation to another.

In the diseases to which the human frame is subjected the problem of heredity is never neglected. By some its significance is accepted, and is held to explain a condition that is quite beyond ordinary understanding.



As years have advanced the importance of heredity in the production of certain diseases has received more special attention ; facts have been established, and by some accepted, and when one comes to the study of psychological medicine—probably the most intricate of all medical subjects—its significance has been accepted without, perhaps, sufficient grounds.

To a disease like insanity, which at every corner is beset with appalling difficulties, heredity is by some held to be the omnipotent factor in its production, whilst by others it is considered and set aside without sufficient thought. During the present time, when the "toxic theory" of insanity is so much in the ascendant, the importance of heredity is apt, by the younger generation at least, to be overlooked, and, indeed, anyone who tries to unravel its mystery and give to it its proper place is by some said to be behind the times, is accused of being unscientific, and is thought thereby to have drifted back to the position of our ancestors, who not only did not know of such a thing as "microbic infection," but who firmly believed that many obscure diseases were directly transmitted from parent to offspring.

When one comes to consider the question of insanity there are facts about heredity that cannot be passed unnoticed, there are facts which cannot be disputed, and yet no one would go the length of saying definitely that insanity is a disease which is transmitted directly from parent to offspring. That in a large percentage of cases of insanity occurring in an offspring the disease can be traced in the family history is beyond doubt, and, as the tubercular parent may beget a child predisposed to the tubercular virus, so also the insane parent begets a child predisposed to insanity—the most calamitous of all diseases. To say, however, that the parental germ-cell is infected—a condition at one time believed in—is making a statement which, in the present state of our knowledge, is scarcely justifiable. Notwithstanding even this assumption requires reservation, for one is at once confronted with a condition like hereditary syphilis. In this the morbid poison is transmitted, but can it be proved that the infection took place through the actual parental germ-cell ?

No matter what statements are made, or what examples are given, for or against the inheritance of disease, we are bound in the first place to believe and accept as a fact that what we are



as human beings is largely, if not solely, the result of our inheritance. Is it not by inheritance that we human beings belong to that marvellous genus—man?

No one doubts the fact that one animal begets its like—and its like only. Not only this, but the offspring bears in many cases a striking resemblance to the parent. Individual bodily conditions are reproduced, and more—individuality of character, both good and bad, appear in successive generations. The ovum enters upon its life, so to speak, charged with inheritance, and more—charged with an inheritance which in many cases cannot be passed over. In the face of facts such as these, one cannot for a moment doubt that an “unstable” parent is more likely to produce an unstable than a stable child. Fortunately, however, this is not always so. We have always to consider the opposing factor, and remember that it may be the stronger; were it not for this the world would rapidly become filled with weaklings. The offspring charged with unstable germ-cells from, say, the father, is equally charged in the reverse way through the mother, and the sum total of those two individuals is in all probability an individual with the good and bad of both parents, but with those qualities probably much exaggerated, minimised, or equalised. If this be so in the ordinary individual why not in the “afflicted” one? Are we not bound to believe and accept the fact that in certain diseases—chief of which is insanity—the unhealthy parent must beget a child at all events predisposed to that disease?

We are led, therefore, to consider the “predisposition,” and it is to this point that I wish to draw special attention in this paper. I do not wish to theorise on a subject like heredity—far be it from me to even attempt without an apology to touch the fringes of such a subject, a subject which has occupied the attention of scientists for generations, and which, moreover, has baffled most; but I wish to draw attention to the importance of certain points as being of paramount interest and significance in the production of mental disease. For some knowledge of such a difficult and interesting subject as heredity, the able works of such men as Darwin and Weismann must be consulted. Darwin, in his book on the *Origin of Species*, seems to indicate that, while the qualities and characters of the ancestors are transmitted to the offspring, there are circumstances, as, *e.g.*, environment and example, which tend to modify or alter those

qualities, and more—that those qualities or characters are gradually altered, inasmuch as their alteration is necessary for the preservation of the species ; in other words, qualities which will be useful in the struggle for existence and in order that the fittest may survive. According to Weismann's conception, living matter has no ending. He believes in a "continuity of the germ-plasm." "A part of the germ-plasm contained in the parent egg-cell is not used up in the construction of the body of the offspring, but is reserved unchanged for the formation of the germ-cells of the following generation. Thus the parent is rather the trustee of the germ-plasm than the producer of the child ; and in a new sense the child is a chip of the old block. Similar material to start with, similar conditions in which to develop, therefore like tends to beget like."(1)

I shall at once commence to draw attention to certain points in the production of mental disease—points which are of importance because their position has been established by facts, and by facts which have been carefully and accurately elucidated.

The points which I propose to consider are :

1st. The importance of, and the position held by, heredity in mental diseases.

2nd. The importance and significance of the so-called neuro-insane constitution in people, the subjects of mental disease: And—

3rd. The presence of a direct cause which is held to be the actual cause of a special attack of mental disease.

Before commencing to discuss and dwell upon these three points in detail, I may briefly state the basis upon which I venture to express my ideas and conclusions.

The facts elucidated have been obtained from an examination into the personal and hereditary history of 100 consecutive cases. For convenience, fifty of each sex have been taken, and it so happens that for that number of each sex there has been covered almost the same period of time, and they comprise the admissions into the higher rate department of the Crichton Royal Institution for a period extending to well over two years. In nearly all the cases the history has been obtained by myself, and by personal interviews with relatives when possible. If an interview was impossible, my information was obtained in answer to written questions, bearing directly on the points upon which I desired information.

Passing now to the first point which I wish to consider in detail, *viz.*, "The importance of, and the position held by, heredity in mental diseases," I would at once preface my remarks with the statement that *one animal begets its like and its like only*. From this quite unmistakable and incontestable physiological law we are forced to believe that individuals or animals transmit to posterity all the traits that characterise the species to which they belong. Although in this paper I am trying to bring out the importance of heredity in disease, I feel certain that its significance can only be realised if the ordinary physiological law of inheritance be accepted and believed in. If it were not through heredity where would we, for example, obtain our instinct—the most remarkable and obscure faculty underlying all animal life, and probably the basis upon which character, such as we observe it in the full-grown individual, is built? Apart from instinct, we find that certain families possess or present certain qualities or aptitudes. For example, through some families we find running, perhaps for several generations, a mathematical, scientific, musical, or artistic temperament, to say nothing of business integrities, truthfulness, and temperance, whilst, on the other hand, one finds in the same way such conditions as drunkenness, dishonesty, untruthfulness, and even bad spelling passing from one generation to another. At every corner, however, we are beset with difficulties, for, although most people would be ready to recognise the occurrence of such qualities and characteristics as I have mentioned, they would be equally ready to explain their presence as being for the most part due to environment and example.

Be this as it may, what I wish first of all to lay stress upon is, that if any given person can transmit his like to an offspring—which is a physiological fact beyond dispute—surely he must also transmit his like in some form, even when that like is an unstable nervous system. What form that like will take must, of course, be greatly modified by environment and by all the numerous unfavourable and antagonistic external circumstances and agents to which we as human beings are subjected.

This being so it is at once apparent that my first two headings, *viz.*, (1) the part played by heredity, and (2) the significance of the so-called neuro-insane constitution, are scarcely capable of distinct differentiation, for in my last para-

graph I indirectly laid stress upon the inheritance of a predisposition, the significance of which I shall discuss more fully later on.

Coming now, without further theorising, to the facts which I have elicited from the examination of 100 consecutive cases, I find that in 55 *per cent.*, 27 males and 28 females, there was a history of insanity or well-marked neurosis in the direct ancestors, *i.e.*, father, mother, and grandparents. Although this is certainly not a large number, still, it comprises more than half of the cases, and one has to consider, of course, the few cases in which reliable information was impossible, and also those about which no information at all could be obtained. No attempt has been made to accurately classify or diagnose the exact nature of the mental illness in those near parents, for in a considerable number all the information granted was, *e.g.*, that a father or mother "had been insane." Moreover, I do not think that it is of such infinite importance to try and prove that a parent and child suffered from identically the same form of mental disease; sufficient be it to prove that there was handed down to the offspring such an intensely unstable nervous system that it had at one time culminated in an attack of insanity—an actual attack of insanity being presumably the acme of nerve-cell instability. In more than half of the cases examined, then, there was a hereditary history of mental disease, and surely even this percentage should be sufficient to make one stagger and dread with fear the begetting of an offspring by those who have at some time in their life been affected mentally.

Having seen, then, that in 55 *per cent.* of the cases there was in the father, mother, or grandparents distinct evidence of insanity, or of a marked neurosis—which I think is almost of equal importance if it be specially pronounced—the next point that would occur to one is, which parent exerts the stronger influence? Is inheritance stronger from the mother or from the father? Most people believe that the maternal heredity is the stronger, but I must say I do not think that this is at all certain. I am inclined to believe that the maternal heredity is stronger in the case of the female offspring, and the paternal in the case of the male. I am not aware, however, that there are on this point any convincing statistics one way or the other. Certainly one does get terrible and numerous mental "flaws"



occurring in a family whose mother was apparently the only weak spot in the genealogical tree, but one gets the same bad histories in families where presumably the father alone was the weak member mentally. Both sides can furnish examples in my own series of cases, and many cases could be quoted from other authorities. Dr. Bruce (2), in his work on *Clinical Psychiatry*, quotes a striking case of parental heredity, *viz.*, "The father became insane at seventy; the eldest daughter became melancholic at the climacteric; the second daughter suffered from puerperal mania at thirty-eight; the third daughter developed adolescent mania at eighteen; and the fourth child, a boy, was born an imbecile; the mother appeared to be a healthy woman."

In my own series of cases, No. 18 (female) furnishes a good example. An extremely neurotic melancholic and rather hypochondriacal father had a family of five, all of whom had had at one time in their life an attack of insanity. Three of the family were sons, and as well as having been at least on one occasion insane, they were all alcoholics, whilst the mother, although she died when young, was apparently quite healthy mentally. Equally striking cases can be quoted as coming from the mother, *e.g.*, No. 14 (male): The mother was an epileptic, and had five children. Three daughters had had attacks of melancholia, one son was inclined to be depressed, and the youngest of the family—a son—was an epileptic. It may also be mentioned that one of the mother's sisters had had at least two attacks of melancholia. Numerous other instances could be quoted from my own series of cases. The hereditary tables in Dr. Macpherson's book (3) (after Möbius and Déjerine) are, indeed, striking as well as most interesting, and show mental defects in whole families, originating in some cases from apparently only one mentally unsound parent.

Coming to my own statistics dealing with the maternal and paternal inheritance, I find that in 34 *per cent.* (19 males and 15 females) there was a bad heredity through the mother, and if one takes into account maternal grandparents the percentage is 42. On the paternal side the number is also 34 *per cent.* (17 males and 17 females), whilst taking into account paternal grandparents, it is 42 *per cent.*, the total numbers being identically the same in both cases. As far as my statistics go (although they are certainly limited), there is no proof to show



whether the maternal or paternal factor is the more potent. In 22 (or 44 *per cent.*) of the males the morbid heredity was through the father or paternal grandparents, whilst in 19 (or 38 *per cent.*) it was through the mother. In the females, 23 (or 46 *per cent.*) showed the morbid heredity through the mother or maternal grandparents, whilst in 20 (or 40 *per cent.*) it was through the father or paternal grandparents. The difference, therefore, is slight, but what difference there is seems to suggest, as I have already done, that apparently the males seem to take more strongly the heredity through the father, and the females through the mother.

It is interesting to note that Darwin, when discussing this point in his book on the *Origin of Species*, says: "It is a fact of some importance to us that peculiarities appearing in the males of our domestic breeds are often transmitted either exclusively or in a much greater degree to the males alone" (4). Whether or not this is a point of importance I am not prepared to say, but I feel certain that an offspring seldom escapes untouched when both parents are mentally unstable. A mentally healthy father may counteract the unstable qualities of the mother, and may beget mentally healthy children, or a healthy mother may counteract unstable qualities in the father with the same good result in the offspring; but I think it is almost impossible for the offspring to escape where there is a bad heredity from both parents. It is almost bound to tell in the offspring—although in many ways far short of actual mental disease—to make them neurotic subjects, and even if they themselves escape from that appalling disease, insanity, they are so slenderly formed from a mental point of view, they enter the world charged with a mental inheritance so far from stable and perfect, that the subsequent generations stand a poor chance. As a result of this bad inheritance, they in their turn are apt "to go to the wall," to break down mentally, to become alcoholics, degenerates—moral or otherwise—neurotics or neurasthenics, and to be apparent to us as the results of Nature's efforts to exterminate a bad stock, and to show us in a truly ironical way that the fittest survive, whilst the weaklings perish.

Looking more widely into the hereditary history in my cases, I find 71 *per cent.* of them came from "bad stock." I mean by this that somewhere in the genealogical tree there

was a mental flaw, a flaw which, even if it occurred in collateral or distant relatives, was sufficient to strengthen the opinion that one of the progenitors of the person in question had been the unstable thread, that this unstable thread had continued to run into some of the successive generations, and had stealthily asserted itself somewhere in the genealogical tree.

In examining only 100 cases one must be careful to avoid "jumping to conclusions"; dogmatic statements are quite unjustifiable in expressing opinions from facts collected from such a limited field of inquiry. I think, however, that such a percentage as has been obtained is not only striking, but should be a stimulus for further inquiry. The mere fact that in 71 *per cent.* of people who had been affected mentally there was proved to be somewhere a hereditary flaw is, indeed, a statement that must give rise to careful thought—a statement which cannot be thrown aside lightly, and which must have some bearing upon the production of mental disease.

Having in the preceding remarks tried to point out that a person's parentage is of such importance that it influences to a great extent the character of the individual, I now wish to pass on to the consideration of my second heading, *viz.*, "the importance of the neuro-insane constitution in people the subjects of mental disease." I do not think the importance of such a "constitution" can be over-estimated, and, in my opinion, it is the "foundation-stone" of practically all insanities. One can hardly conceive of a healthy, stable-minded individual, born of equally stable-minded parents, being the subject of mental disease; such cases may occur, but I feel certain that they are few. No matter what may be cited as being the true cause of any special form of insanity, be it micro-organism, syphilis or alcohol, there must be, I think, a special "receptive medium" upon which those factors exert their influence, or bring about their characteristic changes, and this special medium is undoubtedly the neurotic constitution. Many factors, individually or collectively, go to the formation of such a constitution, but, even if one single factor is of out-standing prominence, I think it is sufficient to go a long way in establishing the presence in the individual of an unstable brain, and to make him in one sense a neurotic subject.

The further one gets away from stability of mind, the nearer does one approach the neurotic constitution. Take, for example,

a person who exhibits undue nervousness. If that person naturally is always in a state of nervous tension, is that person not more liable to a mental breakdown than the stable-minded individual? Is this undue nervousness not the outward expression of unstable brain-cells, and do not unstable brain-cells make themselves manifest to us in every form of mental disease?

From our knowledge of the cerebral cortex—slight in reality though it may be—we recognise the clinical manifestations of “storms,” presumably among its cells. Are these manifestations confined only to the mentally unsound mind? In the patient suffering from acute mania they reach their climax, but does the person who exhibits a fit of violent passion not remind us of the person suffering from acute mania inasmuch as for the time being all self-control is gone, all actions are out of gear, the whole brain, in fact, is in a condition of uncontrollable turmoil? So also in the persons who are unduly nervous or unduly excitable, any slight occurrence may cause, like a match to gunpowder, a sharp explosion; their brain-cells are normally in a state of tension—a tension which is far from safe, and which is constantly altering—the results of which are well known to all of us. Nervousness, excitability, and extreme passion, then, are signs of a neurotic constitution, but these are far from all; these are deviations in the “upward” direction, so to speak, from the normal stable line. So also do we get the “downward” deviations, as evidenced by unnatural gloominess, morbidness, and the tendency to depression.

By some my remarks so far could, I have no doubt, be misinterpreted and misunderstood. I do not wish, nor am I trying, to prove that the person who at a time becomes excitable and depressed, who becomes morbid or loses his temper, is a neurotic. Far from that; all those are conditions which probably every human being exhibits from time to time; but what I do wish to point out is, that the person who exhibits one or more of those characteristics constantly is a neurotic, inasmuch as he is removed from the normal line of mental stability. Many people assert that one has no right to call a person “neurotic” without being able to demonstrate in him the physical evidences of such a condition. With this assertion I am inclined to disagree. Undoubtedly one recognises clinically such a condition, based often solely upon the general appear-

ance. For example, the thin-lipped, delicate, flushed, nervous, and rather apprehensive-looking female is a type of neurotic which is, to the thoughtful physician, quite apparent. It does not need for its confirmation the presence, in that patient, of the highly arched palate or some other defect in development, although the presence of some such defect would undoubtedly be supporting evidence of the condition.

I consider, then, that any person who constantly exhibits, when in his normal self, any deviation from stability, is a neurotic, is a person of neuro-insane constitution, and it is that person who is apt to become, at some period during his life, affected mentally, usually through some adverse external circumstance, no matter whether that circumstance be worry or anxiety, fright or shock, or the "fail-me-never" microbe.

The day has yet to come when special forms of insanity shall be definitely proved to be due to particular micro-organisms. They may be demonstrated in certain kinds of cases, but would that special organism cause the same disease if "injected" into the person with a thoroughly stable brain? Is one to regard mania, for example, as a disease like diphtheria, cholera, or plague? Surely not! No matter how many organisms are asserted to cause it, one has to remember, I think, that that organism grows only upon a suitable soil.

Many authorities would consider my remarks most unscientific, would accuse me of accepting the causation of insanity without sufficient thought, and would think that my remarks were only relevant had they been expressed several centuries ago. I do not wish, therefore, to be misunderstood; I only wish to lay stress on the neurotic constitution as an important factor, if not an omnipotent one, in the production of mental disease. I have no doubt the time will come when a special organism will be isolated in nearly all kinds of mental disease, but I think the time will never come when the presence of the neuro-insane constitution will be overlooked. To do so would, in my opinion, not only be most unscientific, but would be quarrelling with Nature, and putting at defiance her appalling mysteries. Any person who, in a true way, is trying to solve the hidden mysteries of the causation of mental disease, must first of all believe that there is a Nature, that she must be considered along with the wonderful contrivances, suggestions, and discoveries of man, in order to unravel the hidden depths.



Turning again to this so-called neuro-insane constitution, I would feel inclined to approach the subject in three ways: Firstly, What exactly does one mean by the term "neuro-insane"? Secondly, Is a person born a neurotic, or can the condition be acquired? Thirdly, What direct bearing has the condition on actual mental disease? With reference to the first question, what exactly does one mean by the term? This has been already alluded to, and any person is, I think, a neurotic, or of a neuro-insane constitution, who shows in any form pronounced instability or perversity of character. Thus we have the man who is easily upset, easily excited, who is sometimes in the "seventh heaven," and at times in the depths of despair; the man who is "puffed up" with conceit, so much so that his arrogance almost amounts to a delusion of grandeur; the man who is easily swayed from one course to another, who doubts and hesitates, and has little mind of his own; the man who is solitary and taciturn, who shuns society, who is uncomfortable in the presence of others, who is naturally of a gloomy, retiring, foreboding, and ultra-religious disposition. Such are but a few examples of what, when carried to extreme or when persistently present, must be regarded as unnatural qualities, and which betoken anything but a sound and equally balanced nervous system. In a great number of my cases, one or other of these points were outstanding features of the patient's natural disposition. Moreover, I include as well, and consider also of the strongest evidence of this neurotic temperament, any person who has had a previous attack of insanity. Is not this the acme of instability?

Again, is not the alcoholic to be ranked in the same category? Doubtless a few cases of alcoholism can be attributed solely to force of example, but even in those one must consider the brain-cells of the person upon whom the example exerts its influence. Several people may be thrown open to the same examples and temptations, and yet it is probably only the minority that succumb, and is this not on account of the different susceptibility or instability of those brains in question? As Féré very aptly puts it, "to become an alcoholic one must be alcoholisable." (5)

With reference to the second point—Is one born a neurotic or can the condition be acquired?—there is little doubt, I think, but that both conditions may occur. A person may be



born neurotic and remain so throughout his life, and there is also, I think, little doubt that it is in this respect that heredity is of such importance. Actual kinds of mental disease are not as a rule transmitted in the same form from the parent to the offspring, although such cases, of course, do very frequently occur. Thus a mother who has had an attack of melancholia may beget a child who also may suffer from melancholia, but it is much more likely that that melancholic mother passes on to her offspring an intensely unstable nervous system—a nervous system which at some future period is apt to give way, and its owner thus to become the subject of a definite attack of insanity. Such a person, then, is undoubtedly one who has been born with a neuro-insane constitution, the sequela of a bad heredity. It is in this way, therefore, I think, that a bad heredity is apt to tell. Although it does not follow that the offspring of a mentally affected parent will become insane, there is every likelihood that that offspring will be unfortunate enough to be possessed of the neuro-insane constitution.

As well as being born in the individual, this constitution can, I think, be acquired. A person may be born and may appear to all intents and purposes quite stable mentally, and, further, may be descended from parents who in no way were affected mentally—nor did they show any marked instability of mind—and yet that person becomes insane. How does this occur? Where is the suitable soil to be found in this case? The hereditary history is carefully investigated and yet no trace of even nervousness can be found. It is such cases that are apt to overthrow the importance of heredity, and make one feel inclined to think that after all too much importance is attached to it. Still, I hold that this special individual must be of the neuro-insane constitution in order to allow of his mental breakdown, and, as a matter of fact, one finds if one inquires carefully enough, that the condition has been acquired. The person starts life like his neighbour, with a sound, evenly balanced brain; he is, perhaps, in later years exposed to severe strain, his work—business or profession—demands excessive care and thought, and he is subjected to an undue amount of wear and tear. Through stress of business he neglects Nature's laws, he becomes careless about his mode of living, neglects to care sufficiently for his body, is careless about his meals, shuns

exercise and recreation, "burns the candle at both ends," all for the sake of his work. His only thought is for his work, and finally he breaks down in health. He is now no longer the same person; what would not have worried him before does so now; what before was natural manly anxiety becomes restless uneasiness, perhaps even actual depression; he commences to lose interest in things, becomes easily annoyed, apprehensive, and perhaps irritable; he has, in fact, acquired the neuro-insane temperament, and is now on the level with the person who has that temperament naturally—the gift of a bad heredity. He in his turn is apt to completely break down and to become affected mentally.

In this way, therefore, we can often account for the sporadic cases of mental disease springing up in an isolated member of a family, much to the surprise of his relatives, who firmly and possibly quite truthfully assert that such a thing as insanity or even nervousness was "never known of in their family."

The recognition of this method of becoming the subject of a neurotic temperament is not, I think, sufficiently realised. It behoves us as doctors to thoroughly recognise and appreciate it; it behoves us to keep it constantly in view, and to be ready at any moment to step in and check its growth before it is too late, and thereby, from our knowledge, to bestow a blessing not only to an individual who may be rapidly drifting towards an asylum, but also to the yet unborn, who, without being asked and quite unconsciously, are thrust into the world with a heredity over which they have had no control, who are therefore forced to begin the cruel race of the "survival of the fittest" at a great disadvantage and probably much crippled mentally.

I have, then, briefly discussed the meaning of the term "neuro-insane constitution"; we have seen, secondly, that such a condition may be the gift of heredity; that it is an important, if not an almost natural, sequela of a bad inheritance; moreover, I have tried to show that as well as this it may be an acquired condition, a normal person becoming through stress, strain, or adverse circumstances, a person of neurotic temperament.

We are left, therefore, with the third question, "What direct bearing has the condition on actual mental disease"? In answering this point there is, I think, little to add to what I have already said in discussing the foregoing points. Its

bearing on actual mental disease is an important one ; so important is it, indeed, that I question very much if the healthy stable-minded person ever becomes insane. Even if the exciting cause of any definite kind of insanity be ultimately proved to be in that particular case microbic, or if it be definitely proved to be the result of the ravages of syphilis or alcohol or some such poisons, I think we must still look to the original temperament, representing as it must the nidus for suitable growth, destruction, or development. The favourable soil for the occurrence of growth of mental disease is undoubtedly an unstable brain, and this, I think, is a fact of such importance that it can never possibly be overlooked or ignored. To repeat myself, a melancholic mother may beget a melancholic child, but she is much more likely to beget one who has inherited not the same kind of mental disease, but her intensely unstable nervous system, and who as a result of this "hereditary gift" is apt to become in time affected mentally through some adverse external or internal exciting cause.

The results of my statistics dealing with this point, *viz.*, the presence of the neuro-insane constitution in the individual, are, I think, most striking and even convincing. Out of 100 cases I found evidence of this constitution in 93 instances. It was present in 49 out of the 50 males, and in 44 out of the 50 female. When one takes into account that in at least three cases no information on this point could be obtained, and also that in several cases the information granted was extremely scanty and superficial, these results are indeed striking, and allow one, I think, to express with a certain amount of legitimate dogmatism the belief that the neuro-insane constitution is an important—if not an omnipotent—factor in the production of mental disease.

I wish now to consider briefly my last heading, namely, "The presence of a direct cause of a special attack of mental disease."

I would at once state that eighty-four cases out of the hundred which I investigated showed the presence of a distinct cause. What, then, is the significance of such a result? A rapid glance through the "causation" column of my hundred cases would not fail to at once strike one most forcibly that such "causes" as are mentioned are only circumstances which are daily occurrences in the life of almost every adult man or woman. Why

should business worry, overwork, stress and strain, love affairs, etc., be accused of making a person insane? Why should such occurrences affect people so very differently? I must say I am not inclined to believe that the adult man who has been endowed with a strong, evenly balanced mind becomes insane, nor do I think that he becomes the subject of a so-called "nerve breakdown" through overwork. A man who is living an ordinary healthy life, who is taking care of himself, and who, of course, is thoroughly well physically, does not succumb when subjected to strain or hard work; he does not as a rule become nervous or neurasthenic after an attack of "influenza"; he does not become melancholic because he is a "martyr" or a "rejected lover." No! A man who has a mental breakdown resulting from one or other of those occurrences is pre-eminently the man with the neuro-insane constitution. Given a man with this highly strung neurotic temperament, such as I have previously alluded to and described, subject him to severe business worry or strain, place him in financial difficulties, expose him to the worry of an unhappy domestic life, and he will break down almost certainly. One must never forget, however, that if anyone be subjected to such adverse circumstances for any length of time, he, so to speak, "moves one down." What was before a strong, stable, healthy-minded man is that no longer; he passes into the second grade and becomes the man of neurotic temperament, and it is he who is apt to break down mentally.

In dealing with the history of mental illnesses, relations and friends are, of course, most eager to ascribe a cause to the attack—"influenza" or a "fall when a child" being most frequently suggested at some time during our interview. Although one knows, however, how much importance to attach to statements like those, there can be very little doubt that careful inquiry and sifting of facts will almost invariably detect a direct exciting cause. The man's illness, for example, will date from his subjection to severe business worry. It may follow the sudden loss of money, or it may follow a severe fright. Is it not, perhaps, natural that overwork, worry, or shock should act in this way on a very nervous brain? Take the man who is strenuously and eagerly working to support his family, who is having a struggle "to make ends meet." Would not the receipt of bad news or some financial loss affect him? Would



it be unnatural if he became "down in his luck"? Would he be called dull and morbid if, for the time being, he shunned society and sought instead the privacy of his own home? Surely not! but if that man be strong mentally, his worry and anxiety will show themselves in a manly way; he will through time throw them off and gradually rise above his temporary misery. If, on the other hand, he has little reserve stability, is naturally gloomy, and of a nervous and morbid nature, his anxiety, which was at first quite legitimate, will slowly drift into a condition of anxiousness and fear; he next becomes depressed, and finally passes into a condition of true melancholia. His suspicious anxiety and fears remain, he has now lost all sense of proportion, cannot control himself, and from this it is easy to picture almost any kind of mental disease. Such is, indeed, a common story, and one of everyday experience in asylum life.

I maintain, therefore, that in almost every case of insanity occurring in a person of neurotic temperament one can trace a definite cause as the exciting cause of the mental breakdown. In such a category also one would place the alcoholics. The neurotic man gives way to drinking. Does he drink because he is a neurotic, or has the alcohol caused that special constitution? For both sides something can be said, and certainly there is little doubt but that alcohol may exert and even cause terrible havoc on a so-called neurotic constitution, so much so that in some cases it must almost of necessity be ascribed as the probable cause of a certain mental attack.

Take, again, the neurotic girl; is it not, perhaps, natural that the "pangs of unrequited love" may quite unhinge her, but would it unhinge the strong-minded woman, who, free from cares and worries, spends her life working in the fields? I think not! Again, does the act of child-bearing—severe though it may be—unhinge completely the strong-minded mother? I question if it ever does, unless she be naturally a nervous, in other words, a neurotic woman. Many examples could be quoted in dealing with this point, but the conclusion drawn from them all is the same, namely, that in almost every neurotic who has become insane there can be traced a definite exciting cause. My own statistics support this statement, for it was present in 84 *per cent.* of the cases, leaving only 16 *per cent.* to be accounted for, and amongst whom one has to remember



those most interesting and obscure forms of mental disease which begin gradually, progress slowly, and are in reality a slow evolutionary change in the person's character. With a percentage like 84 one is, I think, justified in drawing reserved conclusions, and, although I maintain that there is an exciting cause in the majority of cases, I fail to see why, for example, adolescence is supposed to cause insanity. Why should a physiological process be accused of such actions? Surely Nature is not so ironical. On the other hand, there can be no doubt that during the period of adolescence there is naturally so much extra strain thrown upon the brain—which at best is a strange as well as a marvellous structure—that if that extra strain occurs in a person of the neurotic temperament, he will at that period break down, probably through some adverse circumstances.

Take, again, a disease like general paralysis. No matter what its true cause may be—be it syphilis or microbe—there can be no doubt that even it is more liable to occur in the person the subject of a neurotic temperament, and more, it not infrequently follows some occurrence which one must at all events consider as being a possible exciting cause.

Turning again to my cases, I find that in 84 *per cent.* (46 males and 38 females) there occurred some circumstance which was said to be an exciting cause. In 43 *per cent.* of the cases (28 males and 25 females) that cause was overwork and worry—domestic and financial. In 14 *per cent.* (7 males and 7 females) it was fright or shock. In 16 *per cent.* (12 males and 4 females) it was alcohol, whilst in 11 *per cent.* other circumstances, *e.g.*, marriage and physical illnesses, were stated to be causal. In my statistics the small number of those whose mental illness is said to have been attributable to alcohol is rather striking, but as only one hundred cases have been examined, the small proportion may be simply a coincidence. Another point worthy of note is that out of the fifty females there did not occur one case of so-called puerperal insanity, an occurrence certainly pointing to the fact that such a disease is more a disease of the lower classes, occurring mostly in those who have neither the care nor the attention during a period which is fraught with so much danger, anxiety, and suffering.

Without further comment I will leave my last heading. It has been, I know, dealt with very superficially, but it is a

question that is open to so many speculative assumptions that further reference to it is unnecessary. To deal with it at all thoroughly one would be bound to consider the presence or absence of an exciting cause in all of the numerous and obscure forms of mental disease, and in this paper that is almost impossible. In making the assumptions and suggestions that I have done, my remarks have behind them a basis of fact, without which, of course, all statements are in the true sense most unscientific.

Before summarising my results, and expressing more concisely my conclusions, there is yet one point that I would wish very briefly to refer to, namely, What exactly is the importance of, or what is the significance of, the presence of well-marked physical disease in the ancestry?

In examining my own cases I found that in 40 *per cent.* of them (20 males and 20 females) there was a record of pronounced physical disease in the hereditary history; I say "pronounced," for I included only the graver maladies. Considering that I did not go so carefully into the physical hereditary history, a percentage of 40 is a fairly large one, and would probably have been greater had a more accurate investigation been made.

At present a great deal of attention is being paid to the simultaneous occurrence of mental and physical symptoms in the insane, but what is the significance of marked physical disease in the parents or ancestors of an insane person? That it has some significance there can be no doubt, and one frequently sees quoted as occurring side by side among the members of a family several cases of physical disease and insanity. As an example of this I may mention the following case (No. 29 of my own series): Patient was the second son of a family of nine; his father died of "senile decay," and his mother died at the age of seventy of "jaundice." The nine consisted of seven brothers (including patient) and two sisters. Five of the seven brothers and one sister died of phthisis. One sister is intensely nervous and eccentric. One brother (the youngest), who had been delicate all his life, died of "disease of the liver." Three of the brothers at least, as well as dying of phthisis, were alcoholics. The remaining brother—the patient in question—became insane at the age of fifty-eight.

Again, there is not the slightest doubt that such diseases as phthisis, gout, rheumatism, diabetes, etc., are of very frequent occurrence amongst the ancestors of the insane. It is also an acknowledged fact that parents the subjects of those diseases seem to transmit to their offspring a certain predisposition to one or other of these affections. Does not the presence of, say, *e.g.*, phthisis, if it be pronounced in the ancestry, point to a certain physical degeneracy, and if this degeneracy be handed on to the offspring, as it almost certainly is, may it not appear in that offspring in a different as well as in the same form, and is not that different form very frequently a mental instead of a physical illness—a mental illness being in this case the gift of a weak or degenerate inheritance? Is not this, however, one of Nature's ways of exterminating a weak stock, ironical though it may seem? As I am not dealing with the inheritance of physical diseases in this paper, I shall not dwell upon it, but I wish to point out that, whilst there is frequently seen in the ancestors or relatives of insane persons grave physical diseases—diseases the hereditary predisposition to which is undoubted—it is equally common to find that the predisposition to the special disease in question has been passed over, and its place has been taken by a general predisposition to one of the neuroses, or, perhaps, even to actual insanity. As de Fursac says, "All possible evidences of degeneration are observed among the ascendants and collateral relatives of the insane: neuroses, psychoses, organic nervous diseases, defects of character and morals (criminality), arthritic manifestations, gout, diabetes," etc. (6). We are bound, therefore, I think, to believe that such a thing as the transformation of a neurosis may occur.

#### CONCLUSIONS.

Having discussed the various points of my subject in detail, it only remains now in conclusion to briefly recapitulate and summarise the facts which have been elucidated.

(1) In the first place I think we are bound to accept as a fact the physiological law of inheritance, namely, that like tends to beget like; no matter what are the theories of heredity this law, I think, stands unchallenged. If it be a physiological law of inheritance why should not its importance be of almost equal

significance when dealing with an unsound, or "pathological" heredity? Upon the belief in such a possibility all the problems of this most intricate subject—heredity—are hinged, and hence I wish to lay some stress upon it. Like tends to beget like, even when that like is an unstable, nervous system. It is also acknowledged, I think, that although one animal begets its like, and its like only, the qualities or characters of the offspring—originally those of the parent—are gradually altered or transformed by various circumstances usually to the benefit of that offspring, or in order that that they may be fitted for "the struggle for existence." Hence, also, the person born of unstable or even insane parents, even although he starts life with a bad heredity and therefore at a disadvantage, has a chance that circumstances may be favourable and helpful, and therefore instead of succumbing and "going to the wall" he may be assisted to a higher level. Were it not for this, were it not that Nature after all tends to protect and help the weak, the world would assuredly soon come to a standstill.

(2) From an examination of one hundred consecutive cases, I found that there was a hereditary history of insanity or well-marked neurosis in 55 *per cent.* of the direct ancestors (father, mother, and grandparents). Besides actual mental disease I included those who showed a well-marked neurotic tendency, for I think the importance of such a condition can hardly be exaggerated, and is, in my opinion, if well pronounced, of almost equal significance as an insane heredity.

(3) Further, when one includes as well as the direct ancestors the more distant relatives (aunts, uncles, cousins, etc.), I found that out of the hundred cases 71 *per cent.* had an insane or neurotic heredity. It is extremely difficult to obtain accurate statements as to the percentage of insanity in the ancestors of the mentally unsound. The percentage varies very largely, probably because some observers include as well, when dealing with this point, the presence of a neuropathic heredity; and with this I quite agree, for, as previously mentioned, it is of almost equal significance. Dr. Urquhart, in the Morison Lecture for 1907, records the results of various observers, and he says that "the total neuropathic heredity reaches 72 *per cent.*" Dr. Hack Tuke calculated the percentage as 20.5 out of 136,478 admissions into English asylums. Dr. H. Grainger Stewart reported 49 *per cent.* out of 901 cases at Dumfries, but



he included eccentricity and recognised this particular form of want of mental balance as definitely important. Dr. Savage recorded 34 *per cent.* in Bethlem Hospital out of 1,072 persons. Dr. W. F. Farquharson recorded 30 *per cent.* out of 3,907 admissions to the Cumberland and Westmoreland Asylum. In Dr. Urquhart's experience the percentage of insanity alone rose to 48 *per cent.*(7)

(4) When dealing with heredity it is perhaps worthy of note that there seems to be a tendency for the males to take more strongly the heredity through the father and the females through the mother, but as only fifty cases of each were examined I do not feel justified in making any dogmatic statement upon this point ; it is an interesting point, however, accurate facts about which would repay a careful and thorough investigation.

(5) The next point that I wish to lay stress upon, and that very strongly, is the presence of the neuro-insane constitution in the individual the subject of mental disease, and in my hundred cases I found evidence of it in ninety-three instances. What exactly constituted this so-called neuro-insane constitution I fully described elsewhere.

(6) I pointed out also that this neuro-insane constitution, besides being in most cases the gift of a bad heredity, was a condition which could be acquired through adverse circumstances, etc. The fact that the condition can be an acquired one is, in my opinion, not sufficiently realised, especially as I think there can be little doubt that the presence of this neuro-insane constitution is the basis upon which nearly all mental illnesses develop.

(7) Given a person with a bad heredity, the result in all likelihood is that that person has been born a neurotic, or the neurotic temperament has been acquired. In either case I think that in order to bring about or precipitate a mental attack there must be some special cause or causes. What those are it is difficult to accurately state, but usually adverse circumstances, business or domestic worry, love affairs, alcohol, syphilis, or even microbic infection are sufficient, individually or collectively, to precipitate a mental attack in the person with an unsound brain. I found that in 84 *per cent.* of my cases there was a distinct cause attributable to their mental attack. In 43 *per cent.* it was overwork and worry, domestic and financial. In 14 *per*



*cent.* it was fright or shock. In 11 *per cent.* it was such circumstances as marriage, physical illnesses, etc., whilst in 16 *per cent.* it was alcohol. If alcohol be stated to be the cause of the mental attack, then the case would be called by many alcoholic insanity. The percentage of such cases varies enormously, probably because no two observers classify alike, and it is in many cases difficult to know whether the alcohol causes the insanity or whether it is only a symptom of the insanity. Dr. Clouston says: "From 15 to 20 *per cent.* of the cases of mental disease in both sexes, and about 25 *per cent.* in the male sex among the wage-earning classes in the cities may, taking the country through, be put down to alcohol as a cause 'wholly or in part.'"(8) At the Perth Royal Asylum Dr. Urquhart obtained a percentage of 9.2 out of 520 total admissions, and he also observed that out of 110 alcoholics nearly 43 *per cent.* were hereditarily predisposed to insanity and nearly 22 *per cent.* to alcoholism.(9) Out of my 100 cases I obtained a percentage of 16, and which I think might be regarded as a fairly true average.

(8) It is worthy of note that amongst my fifty female cases there was not one case of puerperal insanity; however, the majority of the female admissions were unmarried. Although Clouston says, "It occurs in ladies with every comfort and attendance as well as among the poor," he also states, "Poverty and want of proper attendance during childbirth, and having to get out of bed and to work too soon, I have seen bring it on" (10). Judging from what I have seen both in the higher and lower classes, I have no hesitation in saying that it is more frequent among the latter.

(9) In 40 *per cent.* of my cases I found in the ancestry evidences of grave physical disease. The significance of this must be looked upon with great reservation, although that it is of some significance there can be no doubt. It may at all events mean that the parents were in a sense physical degenerates, and that their degeneracy appeared in the offspring as a mental rather than a physical flaw, and it supports de Fursac's statement that—"All possible evidences of degeneration are observed among the antecedents and collateral relatives of the insane."

In dealing with any subject which involves a discussion upon heredity, I am well aware of the numerous pitfalls which

one has to encounter. It is easy to theorise about, but almost impossible to prove, the many obscure laws which govern our inheritance. It is only by a careful recognition of facts which have been accurately obtained from a large field of inquiry that one can hope to strengthen any one theory. The moment we depart from facts we at once embark on dangerous ground, and only too readily do we drift into the field of speculative assumption, making thereby any theorising, to say the least of it, most unscientific.

## REFERENCES.

- (1) Green's *Encyclopædia of Medicine*, vol. iv, p. 173.
- (2) Bruce.—*Clinical Psychiatry*, p. 39.
- (3) Macpherson.—*Mental Affections*, pp. 35-39.
- (4) Darwin.—*Origin of Species*, p. 10.
- (5) De Fursac.—*Manual of Psychiatry*, p. 147.
- (6) De Fursac.—*Ibid.*, p. 9.
- (7) Dr. Urquhart.—“Morison Lecture,” *Journal of Mental Science*, April, 1907.
- (8) Clouston.—*Mental Diseases*, p. 483.
- (9) Dr. Urquhart.—“Morison Lecture,” *Journal of Mental Science*, April, 1907.
- (10) Clouston.—*Mental Diseases*, p. 551.

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*The Causes and Treatment of Asylum Dysentery.* By  
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UNTIL the specific causes of the various types of colitis are ascertained dysentery may be regarded as a group of symptoms which are presumably the result of microbic action, although it does not follow that the organisms which have been isolated from the intestines are invariably the specific cause of the symptoms, or that their presence will necessarily produce the symptoms; even the Shiga (or Flexner) bacillus, which is looked upon by many as the origin of non-amœbic tropical dysentery, has been found in the fæces of healthy persons (*v. Allchin*) (1). It is probable that the specific organisms are some of the various bacilli and micrococci which are commonly to be found in the intestines, and which are normally benign

in character, but through certain influences within and around the subject, become pathogenic.

This is particularly likely in the case of so-called asylum dysentery, as this ailment is almost entirely confined to a class of patients who are under the same peculiar conditions, either in public lunatic asylums, or (much more rarely) in poor-law infirmaries. The symptoms of this form of colitis may be described by Manson's (2) definition of dysentery: "A group of diseases of which the principal pathological feature is inflammation of the mucous membrane of the colon, and of which the leading symptoms are pain in the abdomen, tenesmus, and the passage of frequent small stools containing slime, or slime and blood." The only point in which asylum dysentery does not conform to this definition is in the not infrequent absence or slightheadness of tenesmus and tormina; this may be due to the decreased sensitiveness of the nervous system or to the patient's inability or unwillingness to give expression to his sensations because of his mental condition; for instance, only five out of thirty-six patients complained of typical tormina and tenesmus (one, H. T. R., ascribed the latter symptom to attempts to cut him with knives), and less than half of them gave any indication of pain. The occurrence of tenesmus is also dependent upon the position of the ulceration.

It has been recently stated (*v.* Hawkins) (3) that "the evidence as regards the ulcerative colitis of asylums is almost conclusive of the identity of the British and the tropical disease." This view is to some extent supported by Goodliffe, McWeeney, and Eyre, each of whom in separate epidemics isolated bacilli having similar characteristics (*v.* W. B. Knobel) (4); these may have been different types of the Shiga or Flexner bacillus, especially as Eyre (5) in one instance obtained a positive agglutinative action against the tropical *Bacillus dysenteriae*; on the other hand, the Claybury epidemic was attributed by Durham to a small micrococcus, and the Derby County epidemic by Legge to the *Bacillus enteritidis sporogenes*, while in other epidemics large numbers of the *Bacillus coli communis* and of pyogenic cocci have been isolated. From this evidence one can only presume that different varieties of bacteria are concerned in different outbreaks of the disease, and that these organisms are often present in health, but are innocuous, except under certain

conditions, when they are rendered virulent and obtain access to the digestive tract in abnormal numbers.

There are certain conditions obtaining among lunatics in asylums, and peculiar to them, which might well foster this virulence and this increase of ingestion, and thereby lead to the frequent occurrence of the disease in such institutions. The frequency is proved by the statistics of the Commissioners in Lunacy. In 1903 there were 1,225 cases, with 257 deaths, while the deaths from dysentery throughout the Kingdom, outside asylums, were only 53; in 1908, among 94,888 asylum inmates there were 1,068 cases and 235 deaths.

From the notes of one hundred cases which occurred during seven years in Devon County Asylum, I have arrived at the opinion that the two main causes of asylum dysentery are, first, exposure to air which has been vitiated by pollution with fæcal gases and dust, combined with the contact with particles of excremental matter which is inseparable from such exposure; and, secondly, a diseased state of the gastrointestinal tract which is common in lunatics, who mostly suffer from chronic constipation and often from stomatitis; excessive ingestion of organisms is provided by the first condition, and a culture-bed where the organisms may multiply and acquire virulence is provided by the second, especially as the bacteria may have already passed through unhealthy digestive systems; by both conditions the normal physical tone of the patient is considerably lowered.

The first condition applies chiefly to those who have incontinence of urine and fæces with defective habits, and who are generally known as "wet and dirty" patients; the air around them is polluted with fæcal gas and floating particles, and by this means, aided by actual contact with their hands and linen, which must remain to some extent soiled even when a careful watch is kept over the patients, their food and feeding utensils become polluted by excremental matter, and large numbers of intestinal organisms are ingested; this pollution is increased by gnats and flies during the summer months; out of 100 patients 47 were wet and dirty in their habits, and 19 others were in wards amongst wet and dirty patients; thus 66 *per cent.* of them were exposed to fæcal contamination to a marked degree. It is because of their defective habits and not because of any pathological



condition of the nervous system that demented of all kinds are the most frequent victims of dysentery; 38 of these patients were either senile or secondary demented, and 2 others had dementia paralytica, 40 *per cent.* in all.

"Diarrhœa and dysentery are . . . sometimes caused by breathing air contaminated with excretal emanations . . . the long-continued inhalation or ingestion of tainted air may be considered to confer immunity . . . from disease spread by sewer-air" (*v.* Parkes and Kenwood) (6). This is probably why many who have been wet and dirty for years escape the disease, and why many who are exposed to a fœcal atmosphere escape altogether; it is when they have become particularly susceptible through ill-health or other cause and perhaps are exposed to some particularly virulent organisms that they fall victims. For the same reason newly admitted patients are extremely susceptible to the disease, even with very slight exposure to foul air. A certain amount of exposure is bound to occur, although there are few wet and dirty patients in the receiving wards; on the other hand, these rooms often contain a large number of persons who live in them day and night, and this prevents complete ventilation and removal of the polluted atmosphere: 35 *per cent.* of them contracted dysentery within one year of their admission, and 15 *per cent.* within two months. There was no evidence to show that any of them introduced the disease.

The second condition was present in 45 *per cent.* of the patients, forty-three of them being habitually constipated and two of them suffering from recurrent diarrhœa, supposed not to be dysenteric. Twenty were both constipated and wet and dirty; several of them had stomatitis too. With such a state of stagnation prevailing in the intestinal tract it is not surprising that these patients are particularly susceptible to dysentery, although their exposure to a fœcal atmosphere may be comparatively slight; a certain degree of pollution of the air must occur even in dormitories in which no wet and dirty persons sleep, since commodes are placed beside the beds and are used frequently during the night, with the result that a great deal of foul gas must escape into the room.

The symptoms to which chronic intestinal stasis gives rise, are, "pigmentation of the skin, bad-smelling sweat, headache, mental and physical lassitude, inability to do ordinary work,



mental misery and distress" (*v. Arbuthnot Lane*) (7). This is the picture of a melancholic state in which it is difficult to say how much of the intestinal stasis is due to paresis of the muscles resulting from the mental condition, or how far the melancholia is caused and aggravated by the consequent absorption of toxins; however it may be, there is a vicious circle, and the digestive system is in a suitable state to foster an increase in the numbers and the virulence of any ingested organisms.

We have seen, then, that a fæcal atmosphere and digestive disturbances may be the chief predisposing causes of the disease, and that they may account for most of the sporadic cases. When such cases occur they are liable at any time to start an epidemic, as the organism is present in its virulent form, and, unless precautions are taken to isolate the patient immediately, and to disinfect his excrements in the same way as is done in the management of enteric fever, the disease is very liable to spread through the infected ward, and even those in charge of the patients may acquire it, although themselves in good bodily and mental health; however, it is possible that precautions will not absolutely check an epidemic because the infecting material may be carried in small dust particles in the air; for this reason typhoid patients are seldom placed in general wards nowadays, although a few years ago it was not considered necessary to isolate them.

One attendant contracted the disease while in charge of a ward in which ten cases of dysentery occurred during October, 1903; from June to October, 1905, there was an epidemic of eight cases in one ward, and from June to August, 1909, of thirteen cases in three wards.

Most of the epidemics take place in the summer or the early autumn, and in this respect there is a resemblance to infantile epidemic diarrhœa, which is a closely allied disease. This seasonal influence is probably due to an increase in the amount of dust and in the number of flies peculiar to this period of the year. The flies pollute food and feeding utensils with infected matter which they have picked up from excrements and soiled linen; in the same way much of the enteric fever was disseminated during the South African War.

In 1903 there were fifteen cases during September and October; in 1904 there were five cases from June to Septem-

ber; in 1905 there were eighteen cases from June to September; in 1906 there was one in October; in 1907 there was one in June; and in 1909 there were twenty-seven from June to August—that is, 67 *per cent.* of the cases occurred during the months from June to October; the remainder were scattered over the rest of the year.

It is possible that an outbreak is sometimes started by a patient who has a mild attack of diarrhœa which has been overlooked or has been wrongly diagnosed as non-dysenteric; and again, it is not unlikely that patients who have apparently recovered from dysentery may for months or even years pass virulent organisms in their stools, just as do the well-known “typhoid carriers.”

Chills, starvation, and indigestible food are predisposing factors, as they are to many diseases, because they lower the vitality.

The form of mental disease has no influence except in so much as it affects the conduct; thus, dements with wet and dirty habits formed a large proportion—40 *per cent.* of all the cases; 16 suffered from mania, 18 from melancholia, 6 from confusional insanity, 7 from epilepsy, 5 from paranoia, 4 from imbecility, 3 from dementia præcox, and 1 was sane.

Age has no influence; a large proportion were over 60 (38 *per cent.*), but this is because so many dements exceed that age; 17 were from 50–60, 13 from 40–50, 20 from 30–40, and 12 were under 30.

Females preponderate over males in the proportion of 65 to 35, probably because females are more frequently costive and wet and dirty in their habits; the asylum population was in the proportion of 4 females to 3 males, approximately.

The water supply was obtained from a 750 feet bore in conglomerate sandstone, and was free from animal contamination.

The drainage was in good order.

The milk and other food were in good condition.

It has been suggested that nervous degeneration may cause the lesions in the bowel through trophic changes in the mucous membrane, but there is no proof of this; the nervous sluggishness of melancholiacs and confusionals causes intestinal stasis, and this predisposes them to the disease.

Preventive measures must be directed mainly towards the  
LVI.

avoidance of a fæcal atmosphere and the correction of digestive errors, while the patient is to be kept in the best possible health by careful feeding and warm clothing.

It is difficult to do away altogether with fæcal pollution in public asylums where economy is a large consideration, as the staff is necessarily limited (there is usually one attendant for ten patients), and it is particularly difficult in the older buildings, where the dormitories sometimes contain as many as fifty or sixty beds ; but much may be done by segregating wet and dirty cases in small rooms, under the observation of attendants, whose duty it is to rouse them at various times during the night and to see that they deposit their dejecta into bed-pans, commodes, or closets, which should be covered immediately, and then deodorised and disinfected by some chemical, such as Jeyes' fluid ; all soiled linen should be removed at once in a covered receptacle in the same way, and should be disinfected.

Even in the wards in which wet and dirty cases are rare it is impossible to avoid some measure of fæcal contamination of the air, as the patients often use the commodes during the night, and it is too risky to leave deodorants in the pans in case any attempt should be made at suicide ; the only practical remedy is to keep a look-out for those who make a habit of going to stool during the night and to remove them to an observation ward ; or else to turn them out of bed at fixed intervals so that they may visit the closets under the supervision of a patrolling attendant. By this means commodes might be almost entirely abolished from the dormitories.

It is better to remove bed-ridden patients to a day room in the morning in order that their dormitories may be thoroughly ventilated for a few hours, but space, as a rule, will not allow this, especially in the case of large receiving wards.

To prevent actual contagion all attendants and patients who assist in the wards, and especially those who handle the bed-clothes and the lavatory utensils, must be made to wash immediately after completing their work and again before handling any food or feeding utensils ; and every patient must have his hands washed before taking food or drink and after a visit to the closet.

Each case of diarrhoea, even the mildest, should be isolated in a ward reserved for the purpose, or where this is impracticable, in a ward where such short-lived incurables as general

paralytics are kept ; patients who suffer from recurrent dysentery or diarrhœa should, if possible, be kept in a similar ward between the attacks, or at least should be kept on a caution card, as suicidals are, and their stools should be inspected weekly.

Suspected cases of dysentery must be isolated, with their clothes and bedding, in a single room until the physician has seen them and until a diagnosis is made ; any commodes or closets which they may have used recently should be well scoured with disinfectants.

Other patients in a ward in which dysentery has broken out should be kept under observation for a week, and their stools should be examined and their temperatures should be taken regularly ; the latter proceeding is important because many cases occur in which pyrexia precedes diarrhœa and blood and mucus by a day or two ; for example, I. C— (1 day), F. H. H— (2 days), C. S— (1 day), M. J. J— (1 day), H. L— (1 day).

Dysentery patients must be segregated in a ward kept only for such cases, and all the precautions must be used which are employed in the management of enteric fever ; dejecta, linen, utensils, etc., must be disinfected, and special nurses must be told off whose work is confined to the dysentery wards.

It is wise to examine occasionally the stools of each person for a week after his admission, especially if he come from another asylum or from a Poor Law infirmary.

In order to put the patients in the best possible condition to resist the disease, in case they should be exposed to infection, it is necessary to keep them warmly clothed and to regulate their food carefully. This applies especially to those who are subject to diarrhœa, and they should have a special light diet and should always wear a flannel binder round the abdomen. Each patient's mouth should be examined from time to time, and any carious teeth should be stopped or removed ; tooth-brushes should be used regularly, and when necessary the mouth should be thoroughly cleansed with an antiseptic mouth-wash, such as liquor hydrogeni peroxidi, one part in ten parts of water. Above all, the action of the bowels must be regulated by the use of a mixture containing *extractum cascariæ sagradæ liquidum*, *tinctura nucis vomicæ*, and *tinctura belladonnæ*, in doses and at times to suit the degree of constipation in each patient ; to ascertain the latter point notes should be made from time to time of each individual's habits in this



respect. The routine administration of bi-weekly purgatives in fixed doses to everybody is likely to cause intestinal irritation in those who are not naturally constipated. A regular action of the bowels is, however, rarely found in lunatics, as the lack of exercise, the good feeding, and the want of tone of the intestinal muscles all tend to constipation.

In the treatment of dysentery some success has attended the use of anti-dysenteric serum in the early acute stage of the tropical type, but its effects are uncertain (*v.* Flexner) (8), and it has proved of little benefit, so far, in the treatment of asylum dysentery, but *coli* vaccine has been more efficacious in a few instances (*v.* Allchin) (9); specific treatment is still in the experimental stage, and cannot be used as a routine in asylums until more certain results are obtained, especially as it is expensive; but where vaccines can be prepared from the patients themselves we may hope for better results.

Many drugs have been employed with effects varying in different individuals and in different epidemics; MacMillan (10) uses half- to one-ounce doses of oleum ricini with a few drops of tinctura opii, or one large dose of magnesii sulphas, or several small doses at the onset, followed by bismuth and opium if diarrhœa is excessive; he advises against the use of large rectal enemata. Robert Jones (11) gives purgatives at the onset, followed by salol, resorcin, iodine, carbolic acid, or chinosol as intestinal antiseptics, and he also condemns enemata. Stoddart (12) recommends salol or B. naphthol by the mouth, and rectal lavage with a solution of creasote or lysol; he also mentions the treatment with magnesii sulphas. Allchin (13) gives it as his opinion that ipecacuanha and salines are not so useful in the treatment of English dysentery as they have proved to be in the tropics, and advises small doses of calomel with opium, and large doses of quinine; he adds that rectal enemata are uncertain.

Intestinal antiseptics are, in my opinion, of little service, and may even prove harmful by inhibiting the growth of benign and protective intestinal organisms—that is, if they can be used in a strength sufficient to exercise such an action upon bacteria—in any case, they are irritants to the intestinal walls. Opium and other astringents are strongly contra-indicated in the early acute stage, and the same applies to rectal lavage; the latter, however, is the best treatment in chronic cases.



Buchanan obtained splendid results with salines, namely, nine deaths only in 855 cases; he gives one or two drachms of sodii sulphas every one or two hours until the patient is freely purged, and then one drachm of sodii sulphas in one ounce of fennel water four, six, or eight times a day, until a day or two after the cessation of blood and mucus in the stools; if the stools become watery he stops the salines at once (*v. A. Davidson*) (14), and (*Whitla*) (15).

I had the opportunity of seeing the good effects of the continuous use of salines on a number of people who were suffering from acute tropical dysentery in its early stages, and who were under my care in Trinidad, B.W.I., in 1905, and this led me to use it on a series of cases of asylum dysentery; no attempt was made to give ipecacuanha, although this drug is often very successful in the tropics, because in eleven of the thirty-six patients it was strongly contra-indicated owing to their feeble condition (*v. A. Davidson*) (16); four had advanced cardio-vascular degeneration, two failing hearts, three severe chlorosis with poor cardiac action, one was convalescing from erysipelas, and one was possibly pregnant; moreover, it would be quite impossible to administer the large doses of ipecacuanha (half to one drachm of the powder) to a lunatic, because intelligent co-operation is required in order to prevent the return of the drug, and the patient must be kept at absolute rest for four or five hours without speaking, moving, or taking any food or drink. Small doses are practically useless, and de-emetised ipecacuanha has not been very successful.

The following plan of treatment was used in thirty-six consecutive cases; the patient was kept in bed as much at rest as possible, the bedpan alone being employed:

The diet for twenty-four hours consisted of three pints of sterilised new milk (preferably pasteurised), which was given lukewarm in small quantities at short intervals of time (it may be diluted with soda water or barley water if the thirst is great, and if there is gastric irritation it may be peptonised; if new milk disagrees soured milk can be given, or egg-albumen). One pint of arrowroot was added to this diet, and one teaspoonful of brandy diluted was given every hour, that is, directly after a dose of medicine; it acts as a bribe to persuade the patient to take his medicine, it helps him to

keep it down, and also gives a good deal of relief to tormina, besides having a stimulating effect. Beef-tea and meat-extracts should not be given, as they are liable to aggravate tormina and diarrhœa.

Half an ounce of the following mixture was given every hour during the day and night: *R.* magnesii sulphatis 3j, sodii sulphatis 3j, acidi sulphurici diluti ℥x, tincturæ cardamomi compositæ ℥x, tincturæ camphoræ compositæ ℥xx, aquam cinnamoni to half an ounce, and this was kept up until pyrexia had subsided and every trace of blood and mucus had disappeared from the stools; in the case of very feeble patients, in whom signs persist for several days, or in whom insomnia exists, the dose may be given two-hourly during the sleeping hours. The fact of the motions becoming watery need not be considered an indication to stop the mixture, so long as any blood or mucus remains; rather the large bulk of a watery stool produces the desired effect of thoroughly flushing the bowel.

In spite of eleven of the patients being in a feeble physical condition, these large doses of salines did not appear to produce any symptoms of poisoning or exhaustion. Sodii sulphas is non-toxic; the symptoms of poisoning by magnesii sulphas are paralysis, first of respiration, then of the heart, with abolition of sensation and paralysis of the motor reflex areas (*v.* Lauder Brunton)(17); but these symptoms occurred in two only of the small number of recorded cases of poisoning(18); the remainder died collapsed as a result of gastric irritation, or with signs of acute obstruction; they all took large single doses, undissolved or only partially dissolved.

Given every hour in one drachm doses dissolved in half an ounce of water, magnesii sulphas (or sodii sulphas) passes through the lumen of the gut, abstracts fluid from the intestinal blood-vessels, and very little of it being absorbed, is finally evacuated from the anus, the dilution having been too great to allow of any irritating or obstructing action; the diminution of the fluids of the blood is made up in a short time by absorption from the tissues of a nearly equal quantity of the fluids. Matthew Hay (19) found that the combined use of the salts produced a gradual but a well-marked increase in the arterial pressure; consequently, the patients who undergo this treatment can for a few days very easily withstand the call on

their body fluids if they are supplied with a liberal liquid diet, supplemented by stimulants. Should collapse threaten it may be combated by cardiac tonics and by intra-venous injections of normal saline solution.

The drugs were well borne by the feeblest of my patients; for instance, H. T. R—, who was an anæmic and emaciated chronic maniac, with weak cardiac action, took salines in these doses for nine whole days, and, over a period of twelve consecutive days, he consumed 27 oz. of magnesii sulphas and 27 oz. of sodii sulphas; he also took strychnine, digitalis, and sal volatile as cardiac stimulants every four hours; he had 160 motions, and his temperature rose to 102° F. The blood and mucus ceased at the end of this time, and after the administration of the astringent mixture during twenty-four hours, recovery was complete; two or three days later he was up to the standard of his usual poor health. W. W—, æt. 77, suffering from advanced arterio-sclerosis with cardiac failure, took 21 oz. of each salt over a period of seven days with no ill-effects, and his recovery was also quick and complete.

The saline solution accomplishes its work by keeping up a continuous draining action upon the mucous lining of the bowel, whereby the latter is somewhat depleted of blood and its cells are flushed, while all the organisms, toxins, and *débris* which are accumulated in the intestines are carried away and evacuated by the frequent purgation; this irrigation is continuous without being excessive in amount, and it is more thorough in its action and less likely to be harmful than rectal enemata, with their bulk and intermittence and their disturbance and discomfort to the patient. The removal of mucus and other particles relieves the tormina and tenesmus which are a reflex result of their irritation to the bowel.

The two drachms of salts are dissolved in half an ounce of water, roughly a 25 *per cent.* solution of each, and this abstracts sufficient fluid from the body fluids, mostly in the small intestine, to form a 5 *per cent.* or 6 *per cent.* solution, and owing to the low diffusibility of the salts very little of them is absorbed. The fluids which are excreted after secretion and osmosis (*v.* Starling) (20) accumulate in the canal, reaching their maximum bulk in the large intestine, and, partly from ordinary dynamical laws, partly from a stimulation of the peristaltic movements (which is only gentle and therefore does not unduly

disturb the rest of the inflamed surfaces), they are carried onwards and finally evacuated (*v. Lauder Brunton*) (21); too violent peristalsis is also checked to some degree by the other constituents of the saline mixture.

The earlier this treatment is adopted the sooner will the pyrexia, blood and mucus cease (provided that the treatment is not interrupted), and in an asylum where the patients are under constant observation there is no reason why the disease should not be detected in a very early stage, and thereby some of the symptoms may be prevented; for this reason it is wise to give salines, as a precautionary measure, hourly for twelve hours in all cases of diarrhœa, following them by an astringent mixture; they may be given also to any patient in an infected ward who develops a rise of temperature.

The treatment considerably shortens the course of the disease, and, if given in time, should certainly obviate chronicity. Of the 36 patients treated in this way there were mucus and pyrexia without blood for 24 hours in 1; mucus without blood (four with fever and two without) lasting about 2 days in 6 (these were all cases of simple catarrhal colitis; probably the remainder had ulcerative colitis as they all passed blood and mucus, and all except two had pyrexia): 14 of them required less than 2 days of salines; 7, 3 days; 2, 4 days (one, E. H—, died with a fatty heart); 2, 7 days (one, A. J. H—, died); 1, 8 days; 1, 9 days; 1, 11 days; and 1 (K. R—) died without taking any salines, as she vomited everything which was given to her, and, in spite of gastric sedatives, could only be made to retain a little nourishment; she was given rectal enemata containing 20 grains of quinine sulphate dissolved in dilute sulphuric acid and water; she died after eleven days, having passed blood and mucus all the time, and the highest fever being 104° F.

In 2 cases the temperature reached 104° F.; in 6, 103°; in 11, 102°; in 6, 101°; in 6, 100°; the remainder being under 100°; 3 had no pyrexia at all.

It is supposed that salines have the power of reducing the temperature in fevers although they have no such action in health (*v. Mathew Hay*) (22), and they may exert this beneficial influence in dysentery.

When the saline mixture has effected its object in clearing up the blood, mucus and pyrexia no other drugs are required,



except, possibly, cardiac tonics, as diarrhœa usually ceases in a few hours and constipation often follows. Should the diarrhœa persist it may be checked by giving one ounce of the following mixture two-, three-, or four-hourly according to circumstances :  
*R* bismuthi subnitratis gr. xx, tincturæ chloroformi et morphinæ compositæ  $\mathfrak{m}\mathfrak{v}$  to  $\mathfrak{x}$ , tincturæ catechu  $\mathfrak{z}\mathfrak{ss}$ , mucilaginis quod sufficat, et aquam ad  $\mathfrak{z}\mathfrak{j}$ .

Any recurrence of blood and mucus should be treated again with salines.

Post-dysenteric constipation should not be allowed to continue for more than twenty-four hours, and can be stopped by one drachm of oleum ricini or by a glycerine suppository.

The patient should remain in bed for at least a fortnight after the active signs have ceased, and he should be kept in a diarrhœa ward or general paralytic ward, as suggested before, for some weeks (or permanently if subject to relapses), and his stools should be inspected from time to time.

Some symptoms may occur which require special treatment, for example, tormina may be relieved by hot turpentine stupes to the abdomen, tenesmus and dysuria by morphine or cocaine suppositories, or by the rectal injection of half a drachm of laudanum in two ounces of warm starch solution (these symptoms are rarely marked in asylum dysentery), insomnia by one or two drachms of paraldehyde, and vomiting by dilute hydrocyanic acid and bicarbonate of soda.

Jaundice occurred in one patient (S. H—) about six weeks after the attack of dysentery, and it was accompanied by slight intermittent fever for a few days and by considerable hepatic tenderness. He was treated with salines and bicarbonate of soda and recovered, but relapsed again in a fortnight and finally recovered after a few days. Hepatitis is a rare complication except of the amœbic form of dysentery, so possibly this was only a simple catarrhal condition.

If salines produce no good result after a few days' trial the following powder may be given : *R* pulveris ipecacuanhæ gr. j, hydrargyri  $\bar{\circ}$  creta gr. j, pulveris ipecacuanhæ compositi gr. ij, sodii bicarbonatis gr. iij, bismuthi subnitratis gr. v, given two-, three-, or four-hourly.

Should the condition become chronic (it did not in this series of cases and rarely does in asylum dysentery), it may, after a week, be treated with injections of two or three pints of a 1 in



4,000 solution of silver nitrate in water after the bowel has been washed out with a 1 *per cent.* solution of sodium carbonate in water.

There were three deaths among the thirty-six patients ; one of them, K. R—, was unable to take salines owing to severe gastric irritability. E. H— was found *post-mortem* to have advanced fatty degeneration of the heart muscle, atheromatous deposits on the aortic valves, and a fatty liver ; the mucous membrane of the lower portion of the large bowel was swollen and congested and dotted with small hæmorrhages and punctate ulcers ; the lower part of the ileum was also slightly congested and the mesenteric glands were enlarged. She had had the disease for four days only, passing blood and mucus throughout. The highest fever was 102·6° F., and she vomited frequently. A. J. H— died after seven days' illness, passing blood and mucus all the time, the highest fever being 102·8° F. She was given salines for the first twenty-four hours ; they were then remitted for one day and continued again for twenty-four hours, and finally stopped as she was collapsed. Intra-venous injections of normal saline solution were given twice during the last day. I think she might have done better if the saline treatment had been carried on continuously in spite of her weakness, as subsequent patients, who were quite as weakly, stood the treatment well.

The remainder of the patients recovered completely, seventeen within four days of the onset, and all except two of the others (E. H— and H. T. R—) within one week.

The first 64 of the series of 100 cases were given various drugs, *ut seq.*, 25 quinine and opium enemata, 9 pulvis cretæ aromaticæ, 10 bismuth and salol, 9 some form of opium, 4 oleum ricini, and 6 catechu (or combinations of these drugs).

There were 21 deaths among the 64 who were treated by these various drugs, *i.e.*, 32·8 *per cent.* deaths ; the percentage of deaths amongst the 36 on whom salines were tried was 8·3 (3 out of 36).

In all England during 1903 there were 1,225 cases and 257 deaths, and in 1908 there were 1,068 cases and 235 deaths, that is, a percentage of 21 and 22 respectively.

In conclusion, I am of the opinion that much of the dysentery in asylums might be prevented by reducing to the smallest possible amount the faecal pollution of the atmosphere and by

a longer isolation and more careful observation of those patients who have had the disease, while the best results in the matter of treatment of acute cases are to be obtained from the exhibition of salines in frequently repeated doses sufficient to produce purgation, continued without a break so long as active signs of the disease persist, and followed, if necessary, by a few doses of an astringent mixture. The sera and vaccines of the present time are uncertain in their action, but we may hope for a specific cure when the infecting organisms become known more accurately and when suitable vaccines and sera can be prepared from them.

## REFERENCES.

- (1) Allchin.—*Proc. Roy. Soc. Med.*, vol. ii, No. 4, Med., p. 72.
- (9), (13) *Idem*, p. 75.
- (2) Manson.—*Tropical Diseases*, p. 375.
- (3) Hawkins.—*Brit. Med. Journ.*, 1909, p. 1331.
- (4) W. B. Knobel.—*Journ. Ment. Sci.*, April, 1906.
- (5) Eyre.—*Brit. Med. Journ.*, 1904, p. 1002.
- (6) Parkes and Kenwood.—*Hygiene*, p. 227.
- (7) Arbuthnot Lane.—“Chronic Intestinal Stasis,” *Brit. Med. Journ.*, June, 1909.
- (8) Flexner.—Allbutt and Rolleston’s *System of Medicine*, vol. ii, Part II, p. 523.
- (14), (16) Davidson.—*Idem*, vol. ii, Part II, p. 520.
- (10) MacMillan.—*Journ. Ment. Sci.*, 1902.
- (11) Robert Jones.—*Idem*.
- (12) Stoddart.—*Mind and its Disorders*, p. 427.
- (15) Whitla.—*Dictionary of Treatment*, p. 225.
- (17) Mathew Hay.—Lauder Brunton’s *Pharmacology, Therapeutics and Materia Medica*, p. 391.
- (19), (21), (22) *Idem*, pp. 391 to 395.
- (18) “Epsom Salts as a Poison,” *Lancet*, 1909.
- (20) Starling.—*The Fluids of the Body*.

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*Auto-suggestion and Delusional Insanity.* By DAVID THOMSON, M.B., Ch.B.Edin., formerly Assistant Medical Officer, Horton Asylum, Epsom.

THE presence of delusions, whether arising primarily or following other mental states, is significant of a faulty cerebral action, yet the co-existence of normal ideas suggests that the morbid process is limited to certain groups of nerve-cells. It is thus reasonable to suppose that many of the nerve-cells associated

with ideation are in such cases working normally. There would appear to be "wrong thought centres" or "wrong series of associations" giving rise to delusions.

Granting this assumption, what curative measures are practicable? How can we get at these morbid areas or associations?

We cannot lay hands on the cells, possibly much scattered, that are the root of the evil to destroy them. But there is another plan, and that is to train other cells to set up ideas contradictory to those emanating from the diseased cells, that is to say, we must try to produce a habit of thought exactly contradictory to the delusions, and finally, by constant repetition, cause a group of cells to produce automatically ideas dominating them. At all ages the brain seems capable of training to a marvellous extent. It would suggest that there are more nerve-cells than are ordinarily required. In Italy the re-education of demented is thought practicable, which means the training of nerve-cells whose energies have never been tapped.

David Ferrier, in his Lumleian Lecture on "Tabes Dorsalis," pointed out that the great improvement in the gait of tabetics by systematic exercises was evidently due to the opening of new motor pathways, but that this took considerable time and perseverance. Reasoning thus, I commenced to try to develop in several cases of delusional insanity habits of thought directly contradictory to their delusions. I tried to teach them a process of auto-suggestion. I carried out this line of treatment in four cases at Horton Asylum during a period of several months—from November, 1907, till May, 1908.

CASE 1.—H. M. H—, admitted June 10th, 1903, æt. 41, married. Not the first attack.

*Synopsis of notes.*—On admission patient has a silly expression. Behaves very childishly, laughing and talking constantly to himself. He states he can take his food here, but at home it tastes "queerly," and he suspects his wife puts something into it to get rid of him.

*History.*—Patient has been strange since Christmas last. He is constantly shouting and laughing and talking to imaginary people. He dances in the streets to the organs. He refuses food, does no work, is untidy in his person, and wanders aimlessly about.

May 25th, 1904.—He is weak-minded, irrational, imagines he is acted upon in some peculiar way, etc.

May 13th, 1907.—He is re-certified as a case of delusional insanity ; irrational and introspective ; declares he is dead and has been bleeding to death for the last six months.

September 10th, 1907.—He says he is dead. Writes gloomy letters to his wife. Says he has no bones, and that his muscles are torn up.

It was about this time that I got to know the patient. He was quiet, docile, not excitable, and could reason to some extent, but he had a strong delusion that his body was in a state of decline. He was miserable, and said his bones and muscles were rotting away, and stated so in his letters to his wife.

On September 20th, 1907, I started him on auto-suggestion as follows. I wrote distinctly on a sheet of paper the following sentences : " I am strong and happy " ; " My body is strong and healthy " ; " My bones and muscles are strong and supple " ; " I have a cheerful, happy mind. " I brought him into a side room, and made him repeat to me aloud these sentences. After he had repeated them ten times I put a dot on the paper (.). I kept him till ten dots were on the paper (. . . . .), showing that he had repeated the four sentences 100 times. Thus he had repeated 400 sentences, directing efforts of thought contradictory to his delusions.

By systematic accumulations of these I hoped finally to produce in his mind such a habit of these thoughts that his delusions would be finally overwhelmed.

I directed him to repeat these sentences to himself thousands of times a day, and to register the number of times he repeated them by putting a dot on the paper for every ten times. Also, to make sure that he did do something, I directed him further to write down the sentences several times on the paper.

I found the dots and the sentences on his paper at the end of each day, but whether he repeated the sentences properly to himself I cannot tell. Anyhow, I made him repeat aloud to me 400 sentences per day.

By the end of three months he had repeated to himself 150,000 sentences similar to the above, 20,000 sentences aloud before me, 520 sentences he had written out on paper ; total, 170,520 single sentences.

The result of all this, as in the other cases, was very slight. Yet it seemed to me that there was some effect being produced,



which ought to encourage further efforts. He assumed a more cheerful aspect, and his letters to his wife became less gloomy. When I questioned him upon his condition I had him trained to say that he was strong and happy, and that his bones and muscles were quite strong and healthy. But his delusions still remained, though not so intense.

CASE 2.—K. R—, admitted April 8th, 1902, æt. 54, painter, married ; not first attack.

*Synopsis of notes.*—On admission he is violent. His conversation is not coherent. He refuses to answer questions. Says he is on duty. Has delusions that his arms and legs are paralysed and broken, etc.

November, 1902.—He is acutely depressed and deluded.

February, 1903.—He declares he is an animal and a dog in the sight of God, and behaves as such.

I got to know him on October 8th, 1907. His memory was good, but he was extremely depressed, and sat silent with his head hanging down all day long. He said he was suffering judgment for self-abuse, etc. He was very deluded and stated that he heard God speaking to him through the sounds of the billiard balls. He was quiet, well behaved, and not excitable in the least.

On this patient I expended an exceptional amount of energy and time, and although the results after six months were very small, yet I think they were hopeful. It required one month of stubborn perseverance on my part to get him to finally agree to carry out the instructions I gave him.

The suggestions he got were of the following type : "I refuse to have any silly ideas" ; "I am going to be strong and happy" ; "I have a strong and healthy mind" ; "I have absolute confidence in myself." I also got him started to do some useful work in the wards.

In April, 1908, I finished my endeavours, and in my opinion he was then more cheerful and his delusions were not so intensely dominating his mind.

This was the result after he had repeated to himself 296,000 single sentences ; 10,000 repeated aloud to me ; 641 written. Total over 300,000 repetitions.

October, 1908.—The notes describe him as depressed and self-accusatory. Believes he is a water-rat, etc., and that he is under God's judgment. He does a little work and is clean

and tidy. Health fair. This shows, then, how helpless one feels in trying to drive away fixed delusions.

About the other two cases I will only say that I devoted much less time to them, and in them there was very little result to be observed.

Before concluding I would like to mention a rather interesting fact about a similar case.

While homeward bound from a voyage to the West Coast of Africa, a negro, about sixty years of age, came aboard at Sierra Leone and put himself under my care as ship's surgeon. He said he was going to England to get treated by the skilful physicians there. On careful inquiry I discovered that his ailments were more or less imaginary and told him so, and finally I managed to extract from him the whole history of his case. He was a man with a capable brain and had amassed a considerable fortune by his cleverness, but he had become the victim of a delusion which dominated his mind. He had been brought up in the Christian faith, but had become obsessed by the idea that the native fetish-men of Sierra Leone were acting on his brain telepathically and trying to harm him. This delusion had come suddenly eight years previously, and on careful inquiry I found that it had originated in a violent nightmare. I inquired about sun-stroke, but he declared that his work at that time was always indoors.

In the hypnotic sleep suggestions have a very powerful effect, and can produce temporary delusions. Sleep, according to hypnotists, is identical with the hypnotic sleep, except that in ordinary sleep the person is *en rapport* with himself. It might be possible, then, for a vivid idea to arise during sleep, as in a nightmare, which might conceivably form the commencement of a delusion. If, however, it should come to be proved practicable that new thought-habits can be engrossed upon the brain to counteract existing wrong thought-habits, then the practice would be of great use in competent hands in the mental hygiene and training of children.

In the long-fixed delusions of the insane I have shown that hundreds of thousands of suggestions have only slight effect, but they might be of value in very early cases.

I beg to thank Dr. Lord, the medical superintendent of Horton Asylum, for his kind help and interest.

### Clinical Notes and Cases.

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*A Case of Acute Mania Relapsing into Unconsciousness Lasting Seven Months.*<sup>(1)</sup> By NATHAN RAW, M.D., M.R.C.P., Physician, Mill Road Infirmary, Liverpool.

THE following case of a girl is of special interest from the fact that although she had not spoken a word for over eight months she suddenly commenced to talk in a most voluble way, and to quote long passages which she had committed to memory as a girl.

*History.*—The mental history of the girl was fairly good; she had always been bright and active, and fond of reading. An aunt was insane; no other case of insanity in the family was recorded. The girl was engaged in domestic service and was performing all her duties well until three days before admission, when she was observed to be restless and unsettled, with a loss of appetite. That night she was unable to sleep, and commenced to sing and laugh without apparent cause. She rapidly passed into a state of active mania, shouting, gesticulating, and resisting all efforts to help her. Her temperature now commenced to rise and was 103° F.; pulse 126, small and feeble; she was menstruating. As it was impossible to manage her at home she was sent into hospital, when I saw her on admission.

*State on admission.*—The girl was wildly maniacal and delirious, throwing herself about and quite oblivious of her surroundings. She was a strong, well-developed girl of twenty-two years, and before anything else could be done it was necessary to gently restrain her to prevent self-injury.

She was placed on a mattress in a single room, and a nasal feed of milk and egg given, together with 30 gr. of ammonium bromide.

This had a sedative effect for only half an hour, when her maniacal symptoms reappeared.

Her temperature was now 102° F., pulse 120, and she was extremely ill. It is not necessary to describe in detail to this meeting the symptoms of acute delirious mania, as we are all, unfortunately, too well acquainted with them. She had retention of urine and afterwards incontinence, and the bowels were very constipated, necessitating a strong purgative.

The bowels afterwards became most difficult to move and were in a state of paresis.

We were all most anxious to make a diagnosis if possible, but the most careful and detailed examination of the patient was negative, so far as any physical cause was concerned.

Lumbar puncture was performed, but the fluid, beyond an excess of leucocytes, was quite sterile and did not grow on ordinary media. Microscopically no organisms could be found.

Widal's test was negative, and she gave no reaction to tuberculin by v. Pirquet's method.

We were thus left with a possible case of general meningitis, probably confined to the vertex, as there were no localising symptoms and no signs of paralysis or paresis.

The optic discs were a little congested, but otherwise normal. Kernig's sign was not present, nor was Babinsky's. From this time—that is, three days after admission—she gradually became less excitable and restless, and relapsed into a state of stupor, from which she could not be roused.

For eight months she lay on her back with her eyes wide open, but apparently seeing nothing. Each day as I passed her bed she was in the same trance-like condition. Her eyes did not close at night, temperature and pulse normal, and her limbs were inclined to be flaccid, but occasionally there was some resistance to movement.

Her reflexes, both motor and sensory, were normal throughout.

It was thought she had some chronic meningitis, which had destroyed or impaired her mental faculties, but this proved to be erroneous. After remaining in this helpless condition for eight months she suddenly turned on her side and said, "Where am I, nurse."

She was reassured that all was right, and on being offered a cup of milk she drank it without a stop and asked for more. I saw her within half an hour of this time, and although she did not know who I was, she talked in the most rational and sensible way on subjects relating to her before her illness. I tested her memory regarding general subjects of interest in Liverpool, and she remembered all details of many events. I then asked her to write her name and address, which she did correctly, and then she wrote for me from dictation quite accurately; she could read from print and writing quite properly, and she could repeat long passages of poetry.

I can vouch for the fact that she had never spoken or seen print or writing for eight and a half months, and she was under observation in a ward both night and day.

She made a complete recovery, and is now engaged in her former work without the slightest knowledge of what occurred during her long illness.

(<sup>1</sup>) A paper prepared for the Quarterly Meeting of the Medico-Psychological Association held on November 7th, 1909, in London.

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*A Case of Aggravated Hysteroid Movements.*(<sup>1</sup>) By  
ERNEST F. BALLARD, M.B., B.S.Lond., Second Assistant  
Medical Officer, Somerset and Bath Asylum, Wells.

THE patient was a strong, healthy young man at the onset of his illness. There was no family history of mental or nervous disease; the patient was one of ten children.

He was quite well until his twenty-first year, when he began to have "jerky" movements of his head, in which it was drawn backward and

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to the left. He is said to have "strained" his neck while lifting stones in competition with his fellow workmen.

Three weeks after the onset of these head-movements, which rapidly became worse, he attended the Paulton Cottage Hospital at Midsomer Norton, and was admitted there as an in-patient on October 26th, 1906.

On admission he was a strong, well-nourished young man, over 6 ft. in height, well-developed and healthy. His head was drawn back and to the left by strong clonic contractions of the trapezius. These contractions occurred every few minutes, and only ceased during sleep. There was no tenderness in the neck. On one occasion he complained of pain in the left side of his neck, which seemed to be in the region of the spinal accessory nerve. When the head was prevented from moving the shoulder was drawn up. The clonic movements were always worse when the patient was at all excited or fatigued. There was no visceral disease, fever, or mental symptoms.

He improved slightly under treatment (*i.e.*, rest in bed, massage, bromides, and arsenic), and after four months was discharged.

He then went up to Guy's Hospital, was admitted, and remained there for twelve days. His symptoms were the same as when he was in Paulton, and the diagnosis was spasmodic torticollis. He returned from Guy's unchanged, but was able to do some work for about seven weeks, after which the movements of his head became worse.

He then went to London again and was treated as an out-patient at St. George's Hospital from June till October, 1907. When examined there he had backward jerking movements of his head, without pain, and absent during sleep. The right sterno-mastoid muscle was found to be very weak, the right trapezius quite strong, and the left trapezius weaker than the right. The other muscles were normal, those of the back on the right side being better developed than on the left. The movements were clonic, stronger, and rather more frequent than when the patient was in Paulton Hospital. There was some dorsal curvature of the spine. The knee-jerks were increased, and a pseudo-clonus was obtained. The case was diagnosed as spasmodic torticollis. While under treatment as an out-patient he improved at first, but became worse towards the end of September, 1907, and was admitted as an in-patient in October. He continuously lost flesh from about this time, and there was no improvement in the head-movements. While in the hospital he developed an attack of mental disorder which lasted for ten days. In this he became apprehensive, hid himself under the bed-clothes, and had delusions that people coming into the ward were going to shoot him. He gave no trouble during this attack, and did not attempt to get out of bed. Before this apprehensive state he was taking potassium bromide, gradually increasing up to fifty grains *per diem*.

He was discharged from St. George's on December 27th, 1907, recovered from his mental symptoms, but without improvement in the clonic movements of his head. This attack of insanity occurred about one year after the onset of his illness.

He returned home but was unable to work, though he had a partial remission of his symptoms for three or four months. Then he became worse again, spasmodic movements of the trunk began to occur in

addition to those of the head, and in September, 1908, he could hardly walk.

The patient was re-admitted into Paulton Hospital on September 12th, 1908. He could just walk in a jerky manner with his hand steadying his head. He could not lie still in bed, but was continually arching his back, jerking his head backward, and making spasmodic, purposeless movements with his arms and legs. He remained in the hospital for about one month, and was discharged "not improved." While there he was treated by rest in bed, massage, chloral hydrate, and suggestive treatment, with only very temporary benefit. When partially anaesthetised the patient would lie quite still when it was suggested to him that the movements should cease. Finally, after repetition of this treatment, two or three drops only of chloroform on the mask accompanied by the suggestion would cause him to lie still for half an hour or so, after which he would often go to sleep. No permanent benefit resulted from this treatment. He became steadily weaker and more emaciated, though his appetite remained good.

He next went into Clutton Union Workhouse, and from there to Bristol General Hospital, where he was admitted in February, 1909. Here he exhibited the same symptoms as on his second admission to Paulton, in an exaggerated degree. He could not lie on a bedstead, but had to be bedded on the floor. He was quite rational in his mind during most of his stay there, but on February 27th he threw a chair through the window, and owing to this was discharged.

He returned to the workhouse, continued in the same bodily state, but became depressed, emotional, and violent. He tried to injure himself, said he would shoot himself if he could obtain a gun, and that he wished he were dead. He smashed the windows and the crockery, and was violent to the attendants. On these grounds he was certified as insane, and was admitted to Wells Asylum on May 12th, 1909.

On admission to the asylum he was wasted, anæmic, and sweating freely from his movements. He could not stand up without support. He was executing similar movements to those he showed in the Bristol Hospital. These were very forceful, continuous, and appeared to be as much voluntary as spasmodic. They are, perhaps, best described as "writhing." He would rotate his body, arch his back, throw back and twist round his head, and execute purposeless movements of his arms and legs. The arm movements were chiefly rotatory, those of the legs chiefly extension, and at times purposive, *e.g.*, he would try to steady himself by planting his feet on the wall when lying down. He could control his movements to a considerable extent when firmly ordered to do so. He could stand up, supporting himself against the wall with his arm, and remain fairly steady, with only an occasional jerk of his head or shoulder, for some minutes. The movements were complicated, of no definite constant type, and continuous for some hours; they apparently had no localised beginning, no constant order of involvement of the different limbs or groups of muscles, and they were not rhythmical.

He had no pain or tenderness except in his knees, which were superficially sore and red. The hair on the back of his head was worn away

by previous friction (on pillows, etc.) due to his movements. There was apparently no visceral disease in the chest or abdomen.

Mentally he was quite collected and rational apart from his ideas about his movements. His memory was good; orientation, comprehension, and realisation of the general situation were normal. He could converse sensibly and calmly about general subjects, but became emotional and wept when encouraged to control his movements. He said he could not help it; that it was due to "disease of the spinal column" and "curvature of the spine."

The subsequent progress of the case was marked by a continuance of these movements at intervals of some hours, with steadily increasing weakness. He was able to feed himself and to drink; he would seize the cup, control his movements partially for a few seconds and take a rapid gulp. He would continue the generalised movements for some hours at a stretch, sometimes all day, and then when utterly exhausted would sleep for nine or ten hours, during which he would be motionless. At intervals he would lie awake for short periods perfectly still and quiet, and would account for this by saying he was "tired out." On one occasion he wrote a letter to a relative; it was just legible. He was clean in habits.

About a month after admission as he became weaker, the movements began to grow less vigorous. He would sometimes sleep in abnormal, most uncomfortable attitudes, at other times would lie on his back or side normally. While in the asylum he was treated in a single room with mattresses on the floor. He was given bromides, chloral hydrate, arsenic, and hyoscin hypodermically, with only very temporary benefit. His appetite remained good throughout the course of his illness. His mental condition continued as on admission; he showed no tendency to violence or suicide.

He developed a subacute pleurisy on the left side, had two syncopal attacks (due apparently to heart failure from exhaustion), became weaker, and died on June 28th, 1909.

The duration of the illness was thus just over two and a half years. At the *post-mortem* examination nothing of importance was found. The skull was extra hard but normal in thickness. The brain and cord were apparently normal, except perhaps for some slight softness; the former weighed 40 oz. There was a sero-fibrinous pleurisy on the left side and a deficient amount of fat in the abdomen, *i.e.*, omentum, etc. Nothing else abnormal was found. No microscopic examination was made.

I am indebted to Drs. Costobadie, Friend, and Moore for notes of the case while in Paulton, St. George's, and Bristol Hospitals respectively.

(<sup>1</sup>) A paper read at the Meeting of the South-Western Division, held at Fishponds, Bristol, on October 22nd, 1909.

### Occasional Notes.

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#### *The Lunacy Commission.*

The Lunacy Commission, it is rumoured, is to be increased to the extent of an additional medical and an additional legal member, but the amalgamation of the Medical Chancery visitors with the Commission is not yet carried out, even if seriously contemplated.

The supervision of the insane in England and Wales, judging from the present composition of the Lunacy Commission, would appear to require different provision from that which is demanded in Scotland, Ireland, our Colonies, the United States, and all Continental countries. This difference consists in the very large proportion of legal members.

It would be interesting to have a definite pronouncement on the real reason for this. Is it due to difficulties in the interpretation of the law? This, however, cannot be the cause, since so very few questions arise, and even these are dealt with by outside tribunals.

Is it that the persons who apply the law, the judges and justices of the peace who sign orders, the medical men who sign certificates, and the medical officers of asylums, are of such a character as to need all this extra legal supervision? The small number of cases in which questions arise relating to the legal procedure in this aspect would certainly not seem to demand any large legal services, and the few cases that do occur are also dealt with by outside tribunals.

Is the additional legal supervision necessitated by any special proneness to break the law on the part of the medical men or of the attendants who detain and control the insane? Here again it would seem that these officials are not of a less law-abiding character than those in Scotland, or the other countries mentioned.

It would be absurd to suggest that the able members of the legal profession who act as Commissioners are specially useful in the medicinal treatment of the insane, or that any complaints in regard to property, detention, etc., could not as well be attended to by the visiting magistrates. Such complaints have always to be sifted primarily from a medical point of



view to determine whether they are delusions or not, and when so sifted are not usually of such a complex nature as to demand the attention of an experienced barrister, and might equally well be referred to a visiting justice.

It has been argued that the insane in English asylums are more satisfied by having their complaints answered by a legal than by a medical authority, but it is to be doubted whether the majority of medical superintendents would endorse this view, or that it would have escaped the observation of other countries.

There must exist some very urgent reason for the predominance of legal members on the Commission, but it obviously does not exist outside of England and Wales.

It is to be regretted that the Commission has not been strengthened by the appointment of Medical Deputy Commissioners, who would relieve their seniors of much of the work, which could quite well be done by less experienced persons. A great deal of the work is mere drudgery, entailing a vast amount of travelling and discomfort on men whose experience and energies would be expended more advantageously in the more important parts of the work of the Commission. This has been found to work satisfactorily in Scotland, and is a plan commonly adopted in other public departments.

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### *The Care of the Poor Insane.*

Between the class of patients who can pay one pound a week and those who only pay the ordinary rate of maintenance in county and borough asylums is a large class of patients who could pay something less than the cost of the private annex and something more than the pauper rate of maintenance.

This class includes many persons of good education, to whom it is a serious disadvantage to be driven, as many of them are, into the ordinary wards of the (so-called) pauper asylums.

Some of the private annexes do take cases at less than £1 per week, but many draw the line at this, although they make very considerable profits, which are either used in diminution of the rates or in improving the structure, etc., of the annexes, thereby making them more attractive for patients capable of paying higher rates. It is most desirable that full consideration

should be given to the question of the possibility of helping the patients in question more extensively. St. Luke's largely helps patients of this class, and several other registered hospitals do the same, but from the Commissioners' reports of the last few years it would seem that many of these institutions do very little, so that little help can be expected in this direction, the tendency of these institutions being to provide for patients at high rates, and their consequently enhanced rate of maintenance limiting their charitable action.

The private annexes offer a more favourable hope for the extension of aid, but these, too, are exposed to the temptations to which some of the registered hospitals have succumbed.

The solution of the problem would seem to lie in the establishment of special annexes or registered hospitals in which the cost of maintenance shall not be allowed to rise much beyond that of the ordinary pauper asylums, say 15s. per week, and in which the profits of patients paying more than that sum should be rigidly devoted to receiving as many patients as possible who can only afford to pay less.

If such self-denying institutions would not commend themselves, either to the founders of registered hospitals, or to the authorities of our public asylums, they could probably be established by the strong insistence of the Lunacy Commission, acting on the larger county councils.

There can be no doubt that there is here a great gap in the provision of treatment for a highly respectable and deserving element of the lower middle class, and it is certain that the establishment of institutions of the character indicated above would relieve a large amount of unmerited suffering.

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*Post-mortem Examinations in the Tyrone and Fermanagh Asylum.*

A contemporary medical paper states that the committee of management of the above-mentioned asylum has decided that in future no *post-mortem* examinations shall be made on the bodies of unclaimed persons, except in cases of suicide, accidental or doubtful death.

In face of the great advances made in modern pathology this appears to be a distinctly retrograde step. It would

certainly place the medical staff of the asylum at a disadvantage with other asylums in Ireland and other countries, in which more frequent opportunities are afforded for verifying their opinions and for investigating the forms of disease. It must tend to weaken or hinder the development of that keenness of interest and accuracy of knowledge of disease on the part of the medical officers which is so important in the successful treatment of their patients.

Such a retrograde restriction on the progress of medical knowledge would assuredly affect the reputation of the asylum adopting it.

The committee of management no doubt arrived at their decision on grounds that appeared cogent, but it is hoped that on a reconsideration of the subject they will appreciate the overwhelming importance of this aspect of the case, and save their institution from the stigma which so easily attaches in the present day to anything approaching a relapse into mediæval inappreciation of scientific knowledge.

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## Part II.—Reviews and Notices.

*An Introduction to Social Psychology.* By WILLIAM McDUGALL, M.B.Cantab. London: Methuen & Co., 1908. 8vo., pp. 355. Price 5s. net.

We regard this original and readable book as an important contribution towards a clearer understanding of psychology. It is direct in style, devoid of technicalities, and should be studied by all who desire to have a reasonable knowledge of mind. The author fearlessly embarks on a new venture, reconsiders the problems which lie in the very beginnings of mental manifestations and continue urgent in the latest phases of mental development. We are too apt to lose sight of fundamentals in studying psychological manifestations, to begin with complex and sophisticated materials. Here is a thinker who leads us back to instinct and the instinctive process, who elaborates the principle that all emotion is the affective aspect of instinctive process, who analyses complex emotions by the comparative method, not by unaided introspection, and who in the end presents a noteworthy theory of volition.

The reduction of all motives to the search for pleasure and the avoidance of pain is actively combated, and the vague faculty of conscience fares no better. Darwin indicated how this positive science must proceed upon the comparative and natural history method, and this work deals with mental characters which are of prime importance for

the social life of man, and how they act and react in human societies. The aim of the author is to convince the reader that the life of societies is not merely the sum of the activities of individuals moved by enlightened self-interest, or hedonistic ideals, but springs from common instincts and tendencies rooted in remote ancestry. The analysis of those instincts and the emotional excitement peculiar to each invites a lengthy synopsis of the argument. That is impossible here. Suffice it to say that in this analysis it is shown how few and how constant these primary concomitants are, and how masterly are the methods by which they have been distinguished.

The systematic rejection of the opinion that men always act in accordance with intellectual principles is another nail in the coffin of the utilitarian school. Mr. McDougall says: "Directly or indirectly the instincts are the prime movers of all human activity . . . All the complex intellectual apparatus of the most highly developed mind is but a means towards these ends . . . while pleasure and pain do but serve to guide them in their choice of the means." This is a hard saying for the *intellectuals*, but it might well form a text for a new study of the insane, relative to instincts and their mental developments and retrogressions.

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*Manual of Psychiatry.* By J. ROGUES DE FURSAC, M.D., Paris, translated by A. J. ROSANOFF, M.D., New York. Second American edition from the second French edition. London: Chapman and Hall, 1908. 8vo., pp. 406. Price 10s. 6d. net.

Dr. Rosanoff intimates that this edition has been revised, and that he has added notes on psycho-therapy, after-care, Meyer's theory of dementia præcox, and lumbar puncture, notes which are all enclosed in brackets. He claims that Kraepelin's classification is more useful to those who study and treat insanity than any other, and consequently it is very generally used in America. The book begins with an account of general psychiatry—causes, symptoms, and practice—and deals with special forms of mental disorder in the latter and larger division of the volume.

Undoubtedly there is a keen and seaching analysis of the symptoms of insanity, observed over a great area of experience during many years, but the underlying facts of pathology are most briefly treated. We look in vain for any notable advance on the work of Kraepelin and his school. We note in the introduction that when mental symptoms appear alone the disease is said to be *idiopathic*, and is called a *vesania*; when they are associated with alteration of the organic functions the disease is said to be *symptomatic* or *secondary*, and the time is not far off when the conception of the *vesanias* will be relegated to the past. We make bold to say that the time has already arrived for the exclusion of the word *idiopathic* from our vocabulary. If the physical conditions operating as causal factors in any case of insanity have not been recorded, the failure is usually because of their evanescence before they are subjected to skilled observation. As Dr. de Fursac clearly sees, there is a vast difference between the ankylosis of a joint and the



arthritis which produced it. From the medical point of view it is the arthritic state which is the important and elusive condition.

In seeking to define *mental alienation* and *insanity*, Dr. de Fursac suggests that the former term should be applied to all cases in which the mental disorders present an anti-social character, whereas the latter should be restricted to cases in which the mental disorder is an expression of an active pathological process. Thus an idiot or a dement is generally alienated but not insane. It is just this method of dealing with psychiatry which leaves it with a discussion of symptoms and imports into the discussion "anti-social" considerations. It is the insanity, the mental disorder, the arthritis which is our concern. The anti-social result is rather a question of medico-legal importance.

In the same way "manic-depressive insanity" is set up as a clinical entity, without the slightest recognition of English opinion, which long ago founded upon the three facts of depression, excitement and dementia constantly observed and recorded, and, similarly, "adolescent insanity" is disregarded and replaced with the brand-new "*dementia præcox*."

Although Chapter 8 is headed "*Dementia Præcox*," however, Dr. de Fursac proceeds to say that the term is not very fortunate, for *dementia* designates a general and profound intellectual enfeeblement whereas this assumed entity presents an enfeeblement which is often slight and habitually selective; and further, that the disease does not as a rule run a rapid course, nor is it exclusively a disease of early life. He holds that the specific element lies exclusively in the sum of the psychical changes, which are generally permanent, and that it is a disease of auto-intoxication, as Kraepelin has suggested, possibly a disorder of the genital organs. Dr. Rosanoff, quoting Professor Adolf Meyer, seems to deny any real pathology, and would regard any such assumption as purely gratuitous, but indicates that it is the result of vicious or abnormal mental habits. That, of course, leaves us without explanation of the inception of these habits.

We are also disappointed on reading of psycho-therapy, which Dr. Rosanoff regards as an important therapeutic measure, the only means of directly combating a false idea, a baseless fear, or a morbid tendency. After this promising introduction it follows that no full discussion of methods or technique can be given, and the reader is referred to *Dubois* for particulars.

We note *drool* as an equivalent for *dribble* on page 311, and have an impression that Thoreau so used the word. Perhaps it is more widely used in America than in this country.

On the whole, we prefer Kraepelin at first hand.

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*The Criminal Responsibility of Lunatics: a Study in Comparative Law.*

By HEINRICH OPPENHEIMER, LL.D., M.D. London: Sweet and Maxwell, Ltd., 1909. 8vo. Pp. 275. Price 10s. 6d.

This important book has gained the approval of the University of London when submitted as a thesis for the degree of Doctor of Laws. We could wish that the author had been more of a Doctor of Medicine

when he entitled his work *The Criminal Responsibility of Lunatics*. We have long endeavoured to eliminate that term from parliamentary and legal practice. However, it is a great gain to have a full study of the law at the hands of one who is versed in the lore of both professions. It is from this standpoint that the author proceeds to develop his most important contribution to a difficult subject, and we commend the result to our readers. Dr. Oppenheimer recognises the differences which have so long subsisted between lawyers and doctors, and the many endeavours which have been made to compose their contentions. It is only when doctors are face to face with the difficulty of proposing amendments in the law that cannot be seriously attacked by lawyers conversant with the practice of the Courts that they recoil from the task.

The author quotes with approval the saying of Chief Justice Parker, of New Hampshire, to the effect that they might as well hang a beast for homicide as condemn a human being who is deprived of reason. On the other hand Dr. Oppenheimer concludes that an independent and more concrete test than the subsumption of a criminal under the loose term of "*insane*" is indispensable to sound jurisprudence. He regards it as sufficient for the expert to show that the accused did not possess sufficient intelligence to understand what he was doing, not sufficient self-control to restrain his impulses, not that freedom of will to enable him to regulate his conduct in a rational manner; it is then for the Court to draw therefrom the inference in relation to the deed as charged.

In his acute and comprehensive study of the subject comparative law enlightens the discussion, and it is most important for us to study the French penal code and German opinion as presented by Dr. Oppenheimer. He has not omitted to give a long list of the principal works consulted, but we much regret that no index is appended to the book. A synopsis of contents would have been acceptable, but in such a far-reaching production as this the want of a full index is deeply felt. It is eminently a book for reference and consultation, and we hope that this omission will be made good in a new edition. The wide and exact reading demanded by work of this kind also would be greatly enhanced in value by references to the authors and authorities quoted so that they could be easily traced.

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- (1) *The Psychology of Dementia Præcox*. By Dr. C. G. JUNG, translated by F. PETERSON and A. A. BRILL. New York, 1909. Pp. 153, 8vo.
  - (2) *Selected Papers on Hysteria and other Psycho-neuroses*. By Professor S. FREUD, translated by A. A. BRILL. New York, 1909. Pp. 200, 8vo.

These two works form Nos. 3 and 4 of the Nervous and Mental Disease Monograph Series, now being published in America under the editorship of Dr. Jelliffe. Both are designed to introduce the English reader to the school of psychology founded by Professor Freud, of Vienna.

The psychological work of Freud commenced with the now classical

*Ueber den psychischen Mechanismus hysterischer Phänomene*, published in 1893 in collaboration with Breuer. Since that day a vast amount of research has been carried out both by Freud himself, and by his followers in Vienna, Zürich, and Berlin, and some knowledge of the results obtained is absolutely necessary to every modern student of psychiatry.

A review of the original German edition of Dr. Jung's *Ueber die Psychologie der Dementia Præcox* appeared in the *Journal of Mental Science* for July, 1908. But little, therefore, need here be added concerning the subject-matter of the book. Its keynote is the extension of Freud's psychology to the sphere of dementia præcox. Dr. Jung's work has become a classic, and will always remain one of the most considerable landmarks in the progress of modern psychiatry. The present translation will be cordially welcomed by all English readers.

*Selected Papers on Hysteria* contains a translation of various articles which have been published by Freud from 1893 to 1908. Dr. Brill has endeavoured to select those papers which enable the reader to form a comprehensive and connected idea of Freud's theories. He has probably succeeded as well as it is possible to succeed, but there can be no question that the task is one of extreme difficulty. This difficulty depends on two factors. Firstly, Freud has never published any single treatise containing a complete presentation of his psychology; the student is forced to make himself acquainted with a considerable number of isolated works, each dealing with some subdivision of the subject. Of these works the most important are the *Traumdeutung* and the *Drei Abhandlungen zur Sexualtheorie*. Without some knowledge of these two books an adequate understanding of Freud's scattered papers is probably almost impossible. This criticism could only be met by the compilation of a Freud text-book, containing a co-ordinated account of the entire subject. The construction of such a work would certainly be far from easy, but its value would be incontestable. The need for a general treatise of this type is becoming more evident every day. Secondly, Freud's views on certain details of his subject have undergone a very considerable change during the years 1893 to 1908. He has now definitely abandoned many of the hypotheses which he sought to establish in his earlier works. It is therefore inevitable in a selection of papers extending over almost the whole period of Freud's psychological career, that the later articles should contain statements and theories which are incompatible with those appearing earlier in the book. We may cite, for example, Freud's change of theory regarding the specific ætiology of hysteria and the obsession neuroses, and the differentiation of hysteria into retention, hypnoid, and defence varieties—and his change of practice leading to the abandonment of hypnotism and the development of his modern method of psycho-analysis. Chapter IX of Dr. Brill's work includes Freud's own statement concerning the alterations and developments which his theory has undergone, but we could have wished that the book contained a more lengthy and complete introduction in which these various alterations were presented in their proper perspective. The method which has been selected will undoubtedly tend to cause confusion in the mind of the beginner. For those already acquainted with Freud's work, on the

other hand, the present translation will provide an excellent and convenient summary of the whole historical development of the subject.

BERNARD HART.

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### Part III.—Epitome.

#### Progress of Psychiatry in 1909.

##### AMERICA.

By Dr. WILLIAM McDONALD, Jun.

It has not always been an easy task—this preparation of the American section of the epitome on psychiatric work. Year after year the writer has paused before that word "*Progress*" with a big "*P*," obsessed by the limitations which it places on the subject-matter, perplexed at his inability to sift the wheat from the chaff, and to delineate clearly in all the activity called psychiatric only those features which surely made for progress.

This year, however, no such doubts assail, for there is evident in this country, as probably in all civilised parts, a reawakening to the needs of the mentally afflicted, while a broad and powerful current of earnest endeavour is bending toward the bettering of the insane and the prevention of insanity.

While there is still the same interest in the scientific problems of abnormal mental action, psycho-analysis, diagnosis and classification, there is a distinct departure from excessive meddling with the more fanciful and finical of pure theoretical considerations, and a corresponding setting out upon work of a practical nature.

Clinics, institutions, reception wards, out-patient work, laws for commitment and protection of the insane, interest in juveniles, alcohol and immorality as causes of insanity, after-care, means of preventing insanity—these and many others are matters which are now occupying the attention of psychiatric workers, and, better still, of a vast army of philanthropic laymen.

The public is awakening to its dangers from, and duties toward, the ever-increasing body of the aberrant.

Strangely enough, the greatest apathy has been met with among the general medical practitioners, whose lack of interest has not only proved a decided hindrance to advancement, but whose unpardonable ignorance of mental diseases has at times led to out-and-out active obstruction to the strivings of those who are alive to the campaign. Many physicians still look upon hospitals for the insane as they were regarded fifty years ago, and, unconscious of their backwardness, consider the commitment of the insane as a matter of abstract justice rather than as concrete opportunities for the application of modern mental healing. And so, in a recent attempt in Rhode Island to divorce the commitment of the insane from the police court, we were astonished to find some of our own brother practitioners loudly proclaiming the sacredness of human



liberty standing in the way of the proposed changes in the law, and even advocating a turning back to the former necessity for a court commitment in every case where treatment in a hospital for the insane is desired.

It were well, therefore, if the American Medico-Psychological Association would follow the lead of the Medico-Psychological Association of Great Britain and Ireland in suggesting a curriculum and diploma in psychological medicine "for the more efficient teaching and training of the coming generation of alienists," and would, moreover, suggest such changes in the ordinary medical curriculum as might prevent the graduation of men ignorant of the rudiments of modern psychiatry.

For any individual to attempt, in an article such as this, to call attention to every movement indicative of psychiatric progress in a land so broad as ours would be presumptuous. Even omitting South America, Mexico, and Central America, whence reports indicate a budding of modern psychiatric ideas (Brazil and Chili leading the advance), to mention the work of every State in the Union is impossible, both from lack of space and lack of knowledge on the part of the writer. A brief reference to the reports from a few States may serve as an index of what is going on throughout the country.

In little Rhode Island we have had our troubles. In a State which, in its proportion of insane persons, ranks second in the United States, the legislature has been grossly negligent in its provision for the insane until, with every available spot occupied in the State Hospital, the conditions have become intolerable. Now, however, we have hope of better things, for \$225,000 has just been appropriated for a new reception ward in connection with the State Hospital for the Insane.

Reference has already been made to the movement on foot in Rhode Island to do away with the required warrant and police court commitment of the indigent insane, together with the barbaric wording of that warrant to which every such patient must listen: "You are charged with being an insane person."

For persons able to pay board a private commitment is available, and the laws in many respects are of the best. We are, however, somewhat anxious lest in the agitation for still further improvement we may have taken from us that which we already possess.

New York State, as usual, is setting the pace in all that is new. *The Survey*, vol. xxiii, No. 14, contains an account of the new Neurological Institute of New York City which was opened November 29th, 1909. I take the liberty of quoting a brief characterisation of the new hospital, written by Adolf Meyer in a private letter in response to my request for the latest news from New York State.

"The latest and best thing out," he writes, "is the Neurological Institute . . . the most active little hospital for nervous and mental cases I have ever seen, with an extensive dispensary and seventy beds filled. It was especially designed for patients with "so-called functional, curable, nervous and mental diseases," and from all accounts it is wonderfully equipped for both study and treatment."

The New York State Charities Aid Association has a bill before the legislature which will permit the treatment of drunkenness as a disease rather than as a crime. The plan is described briefly in *The Survey*

(vol. xxxiii, No. 21) as, "a follow up, progressive treatment of the inebriate, with probation for the first offence, a farm institution for later offences, with an indeterminate sentence which may be imposed by a board of physicians on application of the patient himself, a relative, the commissioners of public charities, or the trustees of Bellevue."

There is also on foot in New York State another plan which seems to promise further advancement toward the ideal humane treatment of the insane for which we are all looking and longing. This plan proposes to transfer, from the poor-master, the constable and the police to the health officers, the duties and responsibilities relating to the care and commitment of insane persons.

The change is suggested because of the unnecessary aggravation of symptoms which arises from the methods of the constable and poor-master in cases where the attention of physicians and nurses is required.

Without criticising the care of the patient after commitment, Dr. William L. Russell (*New York Medical Record*, January 22nd, 1910) calls attention to two special reports issued by the Commission in Lunacy, which show that "even in the Borough of Manhattan in New York City, where the work is in most respects managed well, 55 *per cent.* of the cases obtain hospital care only through police channels," and that "altogether in the whole State, exclusive of Greater New York, about 35 *per cent.* of the cases admitted to the State hospitals in a year, or about 1000 insane persons, had, previous to their admission, been confined in gaols or lock-ups, or subjected to gross neglect or ill-treatment at home."

In Massachusetts a purpose somewhat similar to the above, but with quite a different proposed method of accomplishment, is exhibited by a Bill before the Legislature—"Relative to persons suffering from certain mental and other disorders or diseases in the city of Boston."

The Act orders that "all persons suffering from the disorders hereinafter referred to, now under arrest or who may come under the care and protection of the police of the city of Boston, and who, owing to the lack of suitable building or wards, are at present placed in the city prison, the house of detention or the house of correction at Deer Island, pending a medical examination and transference, shall be taken directly to the Psychopathic Hospital for examination when said hospital has been completed, etc. . . . If after examination the physician in charge of the Psychopathic Hospital decides the case to be one of delirium tremens, he shall not be obliged to admit patient to said hospital, but otherwise said hospital shall admit and observe or care for all persons suffering from delirium, mental confusion or delusions and hallucinations until such persons can be transferred to the hospitals or institutions appropriate in each particular case, etc."

Dr. Adolf Meyer writes that the plans for the Phipps Psychiatric Clinic to be erected in Baltimore, Md., are about being accepted, and that construction should now begin.

On February 1st, 1910, Dr. August Hoch succeeded to Dr. Adolph Meyer's position as Director of the Pathological Institute of New York State at Ward's Island.

Dr. E. E. Southard was appointed on May 1st, 1909, pathologist to

the State Board of Insanity, Massachusetts, with the duty of supervision of the clinical, pathological, and research work of the institutions for the insane, feeble-minded, epileptics, and inebriates under the general charge of the State Board of Insanity. This position carries with it no direct control of the medical work of the institutions, but grants the right of visiting the institutions, investigation, and recommendation under the Board of Insanity.

Dr. E. E. Southard was appointed Bullard Professor of Neuro-pathology in the Harvard Medical School, September 1st, 1909. The terms of this professorship are as follows :

"This professorship shall embrace study, research, investigation, and teaching in relation to disease of the nervous system, whether functional or organic, and shall include not only the affections ordinarily classed under neurology, but all diseases and disturbances, both those classed under psychiatry and any others that may exist. The methods and detail of work under this professorship are not restricted. It should include any form of research and investigation which may lead to the increase of knowledge of nervous and mental disease. It comprises the comparative study of these diseases in animals and all other living forms."

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#### BELGIUM.

By Dr. JUL. MOREL.

The asylums for the insane, since their transformation, have become veritable hospitals ; and the medical work, especially as regards the curable and improvable cases, approaches that of the ordinary hospital. The result is that the insane in all modern asylums are cared for and observed day and night, as in a hospital, and assiduous nursing is given alike to the excited, agitated, degraded, paralytic, turbulent, destructive, suicidal, etc.

Great Britain has been closely associated with this movement in both its humanitarian and reformatory aspects. Patients are not detained for the profit and benefit of the medical staff, but, on the contrary, to obtain the maximum of care and treatment with a view to their return home.

In both England, Ireland and Scotland, an increase in night supervision has resulted in immense advantages to the patient. Observation at night is necessarily restricted to those patients whose condition calls for constant supervision. In all asylums the greater part of the patients do not belong to this class. The proportion of night staff to patients varies, and depends upon the classes and the numbers in each class. Generally, those who need most attention during the day require the most observation at night.

In Belgium the tendency of most of the proprietors of asylums is still to imitate what formerly was the practice in Ireland, namely, to have a single night watch, who was not always a trained attendant, who patrolled the different sleeping apartments, and whose duty was to summon the regular attendants, who slept in rooms in close proximity to the dormi-

tories, and solicit their help whenever a patient appeared to require it. To facilitate the night work and to prevent the patients from injuring themselves, numerous single rooms were in use in which the patients were put in the evening, often restrained with fetters on hands and feet, which were fixed to the beds, there to remain until the morning. The paralytic patients were abandoned to themselves, and were necessarily dirty because of want of any assistance. Suicidal patients and epileptics with frequent attacks were also restrained. It is true that adjacent to the dormitories there were bedrooms for the attendants, who, though asleep, were supposed to have charge of them.

Upon this state of affairs coming to the knowledge of the Minister of Justice, he demanded from the Committee of Medical Inspection (1) their help as to what measures to take. The Committee of Medical Inspection, in their report, proposed important improvements. They were designed to suit the different wards of the asylums, and the number of attendants for night duty was to be proportionate to the number and class of the patients. All their propositions were not agreed to, but the principles were accepted and most of their report approved of. On March 24th, 1908, the Minister of Justice addressed the following circular to the directors (2) of all the asylums for the insane.

"The reports addressed to my Department have shown that Article 23 of the Regulations framed on June 1st, 1874, which prescribed for each establishment continuous night supervision, is not observed in most of the asylums for the insane.

"The night supervision is generally entrusted to attendants who sleep adjacent to the dormitories, besides the night patrol attendant who makes his rounds at longer or shorter intervals. This system, which evidently does not provide continuous supervision, is not of a nature to prevent accidents, as experience has shown repeatedly.

"You are requested, in consequence, to take the necessary steps to organise in your establishment a continuous night supervision, especially in acute and observation wards and infirmaries. The night supervision ought to be entrusted to the ordinary nursing staff and not to attendants specially appointed for this purpose. There should be maintained at the same time the round of visits which exists at present.

"J. RENKIN,

*"Minister of Justice."*

It is to be noted that the directors of asylums were not even invited to bring the ministerial decisions to the notice of their medical officers.

We rejoiced at these new ministerial utterings, which were for the welfare of the patients; and it was hoped the proprietors would be eager to fulfil them faithfully, because the demands were not exorbitant, and because in the new asylum, Fort Jaco, under the direction of Dr. Ley, these innovations had already been quite independently decided upon, the change to start from the day the religious orders left the asylum to be replaced by trained attendants.

The moment had come for the proprietors of the Belgium asylums to rise to the level of modern ideals, the more so that in the corresponding asylums abroad, the reform of night care and observation had already been



realised. In the United Kingdom there is a proportion of 1 attendant to every 10 patients. In Belgium the law is the same. For ten years the inspectors of lunacy in Ireland have been congratulating themselves on the notable improvement in their asylums, due to reformation of the night service and resulting in the disappearance of a large number of single rooms. These single rooms were formerly filled at night with excited, noisy, destructive, turbulent and dirty patients. If indifference is displayed with regard to excitement, depravity, dirtiness and sleeplessness, we cannot express astonishment if the patients become progressively worse both physically and mentally. We have been told by patients who have recovered that finding themselves tied to the bed aggravated their symptoms. It was not the doctors who carried out the restraint. In very many of the asylums in Belgium the attendants place patients under the restraint considered necessary during the night. There are often, unhappily, omissions in the official journal of restraint, in which ought to be duly recorded all the names of the patients placed in restraint both by day and night. The medical officers are commonly non-resident; they may live at a great distance from the asylum, and they pay only a short visit to their 400-700 patients. This makes it impossible for them to exercise proper supervision during the day and less so at night. Abroad the medical officers are unanimously of the opinion that in proportion as a better knowledge of the value of night supervision is appreciated, so isolation in single rooms becomes less necessary.

In England the ratio of night attendants to patients is 1 to 71, in Scotland 1 to 72. It varies in different asylums. At Leavesden it is 1 to 30, at Aberdeen 1 to 49, and at Stirling 1 to 31 patients.

In Belgium there still exist blocks of single rooms, and the proprietors of certain asylums prefer to remain indifferent alike to the progress made and the happy results shown in asylums abroad. In some of our asylums with 500 patients, perhaps more, there is only one night attendant. The Minister of Justice has just made a concession to those proprietors who believed themselves unable to submit to the instructions conveyed in the above circular. He addressed to them the following letter:

"Considering that the regulations prescribed in the circular of March 24th, ordering the organisation in the asylums for the insane of continuous night supervision by the ordinary nursing staff, at least in the three principal divisions of each establishment, have given rise to serious difficulties, I have decided to replace them by the following:

"Each asylum for the pauper insane should have a special ward where are placed during the night under continuous supervision those patients having need of particular observation.

"If this is adopted, then the night supervision such as is now actually in practice at most of the asylums (*viz.*, one attendant, at least, sleeping in a room adjoining the dormitory, and a night patrol at intervals through the inhabited parts of the asylum) will be considered sufficient. It is important that the night-round should be at least every hour, and that it should be possible to see all over the dormitory from the attendant's room, and that the dormitory should be sufficiently lighted for this purpose all night. Respecting the night staff, it is convenient that

their direction should be confided to a specially qualified attendant, and by preference one of the ordinary nursing staff. There is no objection to the provision of special night attendants provided that they have sufficient experience of service in asylums.

"J. RENKIN,

*"Minister of Justice."*

Once more this circular confirmed the impression that however good the minister's intentions were, and though he had consulted the Committee of Medical Inspection, yet he believed it best not to refer the matter to the medical staff so as to hear their views as well as those of the directors on night supervision. This circular confirms the Minister's indifference to the opinions of the medical staff, and abandons them entirely to the control of the directors. It also has all the appearance of an agreement made between the Minister and certain proprietors of asylums, to nullify the changes ordered in the first circular and replace them by others more in harmony with an egotistical spirit. It is doubtful whether the Committee of Medical Inspection could have wished to go back upon its original propositions, the more so that its recommendations were in practice at the asylums abroad.

In the first circular the Minister rightly stated that he could not regard as night supervision the attendants sleeping in rooms adjoining the dormitory; in the second circular, apart from the supervision of special patients congregated in a particular ward, the Minister accepted the attendants sleeping in proximity to the dormitories as sufficient. During the night they had the right to watch the patients through a little window looking into the lighted dormitories. The second circular insists upon an hourly patrol. The long intervals between the visits will permit of sudden suicidal ideas being translated into action, and such patients, owing to lack of proper supervision, will have time to carry out their suicidal intention. Will the attendants sleeping in their room hear the movements of epileptics when having fits? What is to become of the patients confined to bed who require to satisfy the calls of Nature in the absence of the night attendant? The wet and dirty patients will have to remain so until the appearance of the night attendant! The sick patient unable to call anybody will have to go without help! We could multiply the examples of what might happen during the absence of the night patrol.

It is well known that it is impossible to accumulate in a single ward all the patients who require continuous supervision. In addition, the second circular permits the director to employ at night special attendants provided they have sufficient knowledge of asylums. Who is to judge of this? The director?

To sum up, the medical staff have been completely ignored in the organisation of night supervision in the asylums.

(1) There is in Belgium an Inspector-General of Asylums, who is an official of the Department of Justice and has no medical training. He visits each asylum twice a year. The Committee of Medical Inspection (C.C.) is composed of three medical men (unpaid), who receive their expenses. They have little to do with the Inspector-General, and their reports never receive much attention.—(2) In Belgium practically all the asylums are private institutions, and medical directors do not exist. The directors are appointed by the proprietors; also the two medical directors of

the State asylums have not the same position as generally obtains in other countries. In Belgium the religious bodies contract with the State to supply the furniture of the staff, the food, clothing, bedding, and maintenance of the patients.

## FRANCE.

By Dr. RENÉ SEMELAINNE.

DURING the year 1909 the scientific output has been highly satisfactory. Its peaceful termination was in marked contrast to the discomforts we have already experienced during the present year owing to the floods in Paris. The members of the Société Medico-Psychologique were not able to meet in January, and the Maison de Santé d'Ivry, founded by Esquirol, was suddenly inundated, an event which entailed the hurried removal of the patients to another establishment.

We have accordingly experienced in the twentieth century a disaster such as was aptly described by the Latin poet :

"Vidimus flavum Tiberim, retortis  
Littore Etrusco violenter undis,  
Ire dejectum monumenta regis  
Templaque Vestæ."

We hope that the remainder of 1910 will be more agreeable. The three societies devoted to the study of mental diseases, *i.e.*, Société Medico-Psychologique, Société de Psychiatrie, Société Clinique de Médecine Mentale, emulated one another in their activities : papers and clinical cases have been numerous and interesting.

The Nineteenth Annual Congress of French alienists took place in Nantes at the beginning of August. Dr. Vallon, Superintendent of the St. Anne Asylum in Paris, occupied the chair. The attendance was large, owing to Dr. Vallon's scientific attainments and personal popularity. In his presidential address he criticised severely the new Lunacy Law which has been so hastily enacted by the Chambre des Députés. Dr. Vallon regards it as a piece of retrograde legislation, which, obviously directed against the alienists, will inevitably be prejudicial to the insane. It is now under the consideration of the Senate, and Dr. Vallon hopes that their discussions will be prolonged interminably. Dr. Victor Parant, of Toulouse, presented a report on the fugues and psychiatry. He divides the fugues into two classes, according as they exhibit a specific type, or do not present definite clinical features and distinct origin, but are common to various affections. The following are examples of the former class :

(1) Fugues in melancholic states. They originate from an acute attack of anguish or in states of simple depression. Of those that originate in conditions of anguish, the onset is sudden, and without premonitory signs.

(2) *Fugues oniriques*. A typical example is the fugue in alcoholism, which is characterised by delirium and sensory disorders.

(3) Fugues in epilepsy. The impulse is irresistible, sudden, and does not rise into consciousness. Ambulatory acts may precede the

fit as an aura; they may also make their appearance during an incomplete convulsive attack, and in such cases seem to be only the continuation of a commenced act, such as walking. This is not a true impulse, but an automatic action. Where impulses are consecutive to fits, sometimes a maniacal state of agitation is concomitant. Similar impulses may also be observed without any convulsive attack.

(4) Fugues in dementia præcox. The impulses exhibiting a demented type.

(5) Dromo-maniac fugues—they are impulses with or without obsession. The patients are always predisposed.

(6) Fugues in secondary states.

(7) Systematised fugues. Two conditions are indispensable—a favourable soil and a hallucinatory delirium. Fugues are frequently observed in delirium of persecution and in ambitious delirium. Fugues not included in the above specific types may be noted:

(i) In general paralysis. They occur in the prodromal stage, or in the invasion of the disease, and the origin seems to be an intellectual or a motor hyperactivity.

(ii) In senile dementia. Such patients may exhibit amnesia, motor hyperactivity, automatism, a delirious idea, or an emotional disorder.

(iii) In maniacal excitement. Such fugues depend on a general state of functional exaltation, and may be observed in excited patients. There is also sometimes alcoholism in addition.

(iv) In periodical psychoses. During the maniacal states.

(v) In idiocy and imbecility. The fugues are uncommon in idiocy and frequent in imbecility.

(vi) In children. Fugues in children are not often pathological. In such cases one may have to deal with a congenital debility of mind, some nervous and episodic condition, or a delirious state.

(vii) *Fugues à deux* and *fugues gémellaires* have been noticed by some others.

Dr. Regis, of Bordeaux, is of the opinion that there is a constitutional tendency to fugues. Such tendency is hereditary, precocious, durable, paroxysmal, and gives rise, during the fits, to a peculiar mental condition, adaptable to intercurrent complications of delirium. In support of that assertion he reports the case of Jean Jacques Rousseau. In the family of Jean Jacques can be observed instability, migratory habits, expatriation, and disappearances. His father presented during his lifetime numerous and remarkable fugues. His brother, in early adolescence, ran away and disappeared for ever. His uncle, and his cousin-germain Abraham Bernard deserted Geneva and their families. Jean Jacques, when he was sixteen, impulsively left his native town because the gates had been closed one evening when he was on the point of coming in. And during his whole life he was a perpetual traveller. During his wanderings he enjoyed a peculiar state of euphoria—a remarkable happiness—and may be regarded as the chief of those patients who are enamoured with Nature. In dromomania there are not—as in dipsomania or kleptomania—shame and remorse consecutive to the fugues. Jean Jacques Rousseau was sorry for the mischievous deeds he happened to perform during his pathological wanderings, but could not regret the wanderings themselves, even when they entailed some loss in his estate.



or his prospects. He presented also impulsive fugues with delirious determinations. He had ideas of persecution, but exhibited the characteristics of a melancholiac. Some of his fugues, at that time of his life, were not pathological, being justified by the popular ill-feeling, but others were impulses and exhibited genuine characteristics.

The most characteristic example seems to be his fugue to England in the month of May, 1767. Dr. Regis concludes that there are people with a hereditary tendency to migratory impulses—the fugue runs in their blood. Dr. Cruchet, of Bordeaux, describes a fugue as a sudden, irrational, or unreasonable act determining an immediate flight from the place the sufferer chances to be in. Fugues may be divided into the conscious, the subconscious, and the unconscious. Dr. Haury, of Sathonay, observes that fugues are noticed in the army, and most frequently take the form—from the military point of view—of vicious delinquencies, absences without leave, and desertions. In a visit which he paid to the asylum of Bel-air, near Geneva, he happened to find amongst the lunatics several French deserters.

The two societies of neurology and psychiatry united for their annual meeting. The subject discussed was the part taken by the emotions in the genesis of neuropathic and psychopathic accidents. Drs. Claude, Dupré, Hallion, and Pierre Janet, had undertaken the duty of elaborating a guide to the debate. The two societies held four meetings. Dr. Gilbert Ballet, Professor of Mental Diseases in the Faculté de Médecine of Paris, and President of the Society of Psychiatry, occupied the chair with his usual ability. Dr. Dupré presented the report on the psychiatric side of the question. According to him there is an emotional constitution, which can be detected by the following signs: An exaggeration of tendon, pupil, and skin reflexes, a localised hyperæsthesia, vasomotor and secretory disturbances, a tendency to spasms, and an abnormal distribution of the physical and psychical effects of emotion. The emotional constitution seems to be characterised not only by a diffuse exaggeration of sensation, but also by a defective inhibition of motor, reflex, and voluntary impulses. The emotional constitution is a favourable soil for all psychical anomalies, such as obsessions, phobias, impulses, and sexual perversions. On such soil may grow melancholic and maniacal *syndromes*. The preponderance of the emotive element is recognised by the intense anxiety which characterises the syndrome. Emotion is an important ætiological factor in confusional and traumatic psychoses, and seems to have been an important element in collective psycho-pathology, and in the political, religious, and military history of every age.

Drs. A. Antheaume, of Paris, and Mignot, of Charenton, have published an interesting book on mental diseases in the French army. A paper on this subject was read and discussed at the Congress of Nantes. The authors describe all the varieties of mental diseases observed in the army, and discuss the cases from the administrative, medico-legal, and prophylactic points of view. They especially ask for a compulsory psychiatric examination of all soldiers who are brought to trial at a council of discipline or at a court-martial.

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## GERMANY.

By Dr. J. BRESLER.

At the annual meeting of the German Association for Psychiatry, held on March 23rd and 24th, at Cologne and Bonn, the principal subject for discussion was the question of the connection between syphilis and general paralysis. The speakers were Plaut (Munich) and Fischer (Prague). Dr. Plaut came to the following conclusions: (1) Without syphilis no paralysis. (2) It is not improbable that during paralysis active virus still exists in the body, and spirochætae are present. (3) There are not sufficient reasons for presuming there is a syphilis *à virus nerveux*. (4) The fact that, in those who afterwards became paralytics, the early symptoms of syphilis were singularly mild, suggests an abnormal predisposition. (5) The attempts to establish a connection between heredity, degeneration and temperament, or constitution and general paralysis, have had no definite results, and it would appear doubtful if there are sufficient grounds for accepting a peculiar predisposition of brain. (6) The exogenous influences (alcoholism, trauma, cerebral fatigue) have probably no essential effect, but act only as associated factors, diminishing the somatic and psychic resistance. (7) The variability of the syphilitic changes in the different stages of the disease does not appear to be caused by differences in the character of the spirochæte, but by a gradual change in the way the patient reacts, because this change of reaction leads to tertiary manifestations in only a small percentage of syphilitics, and a further change may lead to paralysis; it is not astonishing that only a small number of syphilitics become paralytics. (8) A number of considerations makes it probable that paralysis is preceded by preparatory syphilitic processes of a chronic kind; it is impossible to say if these are localised in the central nervous system or in any other part. The elapse of a long period of time between syphilitic infection and the onset of paralysis is perhaps explained by this circumstance. (9) The uselessness of mercury in paralysis does not disprove a connection between syphilis and paralysis, because of our ignorance of the pharmacology of mercury. (10) The decision whether the histological changes in paralysis are of a syphilitic character must be, and is, left to the anatomist. (11) The result of serum diagnosis points to a very close connection between syphilis and paralysis. Regarding this we have no clear idea as to the biological position of the reacting substances at present, but some day a definite answer will be forthcoming.

Dr. Fischer's opinions were: (1) In paralysis there are very characteristic changes in the brain, but the diagnosis depends upon a consideration of the whole and not upon any one sign. (2) The histo-pathological changes consist of a decay of the parenchyma associated with chronic inflammation, but the one must be regarded as independent of the other. (3) The clinical conception of paralysis is based upon its histo-pathology. (4) From the clinical standpoint the varieties of general paralysis are—(a) the common form, (b) paralysis by areas, (c) the atypical form, (d) the stationary form. (5) On anatomical grounds paralysis cannot now be held to be a direct syphilitic disease.

Professor Alt (Uchtsprunge) read a paper on the treatment of the young and adult insane epileptics and idiots in the same institution. He stated: (1) It is erroneous to think that young epileptics and idiots need less psychiatric care than corresponding adults; moreover, patients of this kind are especially suitable for exact psychiatric treatment and have need of it; (2) the separation of the young insane epileptics and idiots as regards curability or incurability into different asylums is impracticable and harmful; (3) the presence of a conveniently situated and properly constituted ward for juveniles in an asylum for adults, *i. e.* the treatment of both young and old in the same asylum, is preferable to a separate hospital for the young; (4) the addition to an asylum of a "boarding out" system for the juvenile insane, for epileptics, and especially for idiots is a veritable blessing.

The Association accepted the following propositions<sup>(1)</sup> made by a special sub-committee as regards the training of judges: (a) Obligatory; (1) attendance at lectures on forensic psychiatry, also demonstrations and practical work; (2) a knowledge of prisons, penitentiaries, and all establishments for compulsory education, asylums, inebriate asylums. (b) Optional; a knowledge of criminal psychology.

The following table shows the forensic practice of asylum physicians in Prussia. It is known that alienists are reproached with certifying too readily accused persons who are suspected of mental defect. This opinion is refuted by this table, which shows that the number of accused persons judicially remanded for mental observation in the asylums was, during the years 1906-8, strikingly higher than during 1901-3. Although the judicial authorities during the former period were more inclined to this procedure, the number certified fell from 70 *per cent.* to 57.6 *per cent.*, which shows that the psychiatric experts are exact and scrupulous in their methods.

*Table showing the number of persons received into the public asylums of Prussia for certification under § 81 of the Criminal Law.*

Periods of time.	Total number.	Number suspected of a morbid mental state, within the meaning of § 51 of the Penal Law (Loss of Free Volition) at the time of the deed.		Number in which no definite opinion expressed.
		Number certified—positive opinion.	Number not certified—negative opinion.	
1906-07-08	1727 (575 per annum)	996—(332 per annum) = 57.6 <i>per cent.</i>	679 = 39.3 <i>per cent.</i>	52 = 3 <i>per cent.</i>
1904-05	915 (457 per annum)	585—(292 per annum) = 63.9 <i>per cent.</i>	301 = 32.9 <i>per cent.</i>	29 = 3.2 <i>per cent.</i>
		As having existed.	Opinion negative or indefinite.	
1901-02-03	1085 (361 per annum)	760—(253 per annum) = 70 <i>per cent.</i>	325 = 29.9 <i>per cent.</i>	

In the summer of 1909, the scientific world was surprised by the publication of a new reaction of the blood peculiar to certain classes of the insane. Drs. Much and Holtzmann stated that they had found that the blood in cases of dementia præcox or those whose ancestry showed this disease, and in epilepsy associated with circular mental disease, gave a special reaction. Washed human blood-corpuscles were not dissolved by cobra poison when the blood-serum of a patient affected as described was added. If, however, the serum of healthy or unaffected persons was added this solution takes place (see "Psycho-reaction" in *Munch. med. Wochens.*, No. 20, 1909). Unfortunately experiments by a large number of asylum physicians did not confirm these results (see Abstracts in *Psychiat. Neurol. Wochenschrift*, vol. xi, 1909-10, Nos. 10, 11, 17, 18, 19, 20).

(<sup>1</sup>) *Vide proposals in extenso, Psychiat. Neurol. Wochensch.*, No. 14, 1909-10.

## ITALY.

By Dr. LUIGI BARONCINI.

THE psychiatric works published in Italy during the year just ended have been numerous and in some cases very voluminous. Some are well compiled, some arrive also at interesting conclusions, but nearly all either deal with questions too special or too minute, or leave the latter aside and occupy themselves with neurological questions only. The former, the clinical works, concern themselves in general with special symptoms which have no importance in assisting the knowledge of the nosography and psycho-pathology of the different diseases, or else illustrate clinical cases which are remarkable by their rarity. In any case they represent rather contributions to current ideas amongst the leading men. It is, then, impossible to give a *résumé* of these works; we should only be able to quote their titles, which would be objectless. I have no better news to give regarding the progress of pathological anatomy. Dr. Perusini, of the Psychiatric Clinic of Rome, proclaims, in a powerful article, the necessity of propagating the anatomico-pathological ideas of the school of Kraepelin; but up to now the histo-pathological study of the nervous system has been pursued without uniformity of method, as also without precision of aim. Only in Rome, thanks especially to Drs. Cerletti and Perusini, they have organised an anatomico-pathological section in the Clinic of Tamburini, and there they are trying to put new life into this highly important branch of psychiatry. But the greater portion of Italian psychiatric works relates to neurology, a branch which promises easier and more brilliant success. In my last contribution I drew attention to the tendency amongst Italian psychiatrists to direct themselves rather to neurological studies. This tendency had its culminating point and its official sanction in the foundation of the Society of Neurology, which gathers around it all the *personnel* of the psychiatric clinics. This Society held in 1909 its Second Congress at Genoa, at which the following general subjects were discussed:

(1) The serum diagnosis of nervous and mental diseases (Rossi).



(2) Acute myelitis from the clinical and the experimental points of view (Catola).

(3) The physiological pathology of the optic thalamus (D'Abundo).

A rather important meeting from the scientific and practical point of view was held at Milan to organise the struggle against endemic cretinism with the object of combating this scourge, which infests some of the most beautiful and most populated regions of our country. There sprang into existence a committee which organised a meeting in Milan to discuss a programme of work which would have to be developed in an organised form throughout the nation. The report on this organisation was entrusted to Professor Tamburini, who presented the very remarkable work accomplished by Doctors Cerletti and Perusini in his clinic. These authors in their report took up the scientific as well as the practical side of the question. They presented a scheme of all the researches to be made in order to bring to light the ætiology and pathogenesis of the disease, and the application of prophylactic and therapeutic measures, of which science and practice had demonstrated the utility. In order to carry out this programme the meeting in Milan decided also to make an appeal to as many of the leading men of the profession as possible in order to interest them in the humanitarian work, and for the financial part to have recourse to the State administration and to provincial organisations. If the leading men and the other organisations to which the appeal was made respond as it is wished, there is reason to hope that soon the plague-spot of endemic cretinism will disappear from our country, in the same way as those other scourges of pellagra and malaria, which were formerly so widespread, and are yielding more and more to the combined efforts of the scientists and the administrations.

The special nature and rarity of the cause which occasioned them prompt me to recall to mind the treatises which appeared on the occasion of the terrible earthquake which destroyed the towns of Messina and Reggio in Calabria. Certain of these works are simple as well as very interesting introspective analyses of those who escaped (such as those of Parmeggiani and Provenzal, published in the *Rivista di Psicologia Applicata* of Bologna), and others are simple psychological analyses of the phenomena observed (Cesare and Paola Lombroso, G. C. Ferrari). Others study the neuropathic phenomena observed in the case of those who suffered in the disaster (D'Abundo and Neri).

Towards the end of the year there was established at Florence an association of doctors belonging to the asylums in Italy, having as its object the protection of the professional interests of the medical men engaged in asylum work. It was hoped to accomplish this task by the ancient Società Freniatria Italiana, but after many efforts the doctors decided to provide for their moral and material advantage by a special society. During the first congress one of the questions which aroused the greatest interest was that of the autonomy of the medical officers in their departments after a probationary period of two years' duration. As all were not in agreement on this subject it was decided to submit the question to a special commission, which was to present its conclusions at the next Congress.

The regulation of 1905 dealing with the Lunacy Law, which had many faults at first, has been modified this year by the Government in accordance with numerous criticisms which had been addressed to them.

The more important modifications relate to the chronic harmless insane and the feeble-minded. Under the old regulations these patients had to remain under care in the asylums; now, on the contrary, the provincial authorities have power to classify the patients and place them in special houses, either outside or within the asylum boundaries, thus giving the asylums their true functions as hospitals for mental diseases.

The new regulation encourages home treatment and also family care, which is extending more and more around the asylums to the advantage of the patients and of the provincial authorities. Discharges are also made more easy.

Unfortunately there has not been any modification of the judicial procedure relative to the admission of patients, a procedure which is intended to protect the liberty of the subject, but which, unhappily, prevents proper treatment from being given at a period when such treatment would be most likely to prove helpful to the patients.

Italian science has sustained a sad and irreparable loss in the death of Cesare Lombroso, whose name was so well known. His work dealt with many and varied aspects of insanity—criminality, genius, prostitution, political crimes, pellagra, cretinism, hypnotism. Lombroso's treatment of these vital questions was sometimes superficial, but ever genial. Evidence of the great esteem in which he was held was given four years ago by the cordial demonstration on the part of the most eminent anthropologists and criminologists of the entire world who assembled at Turin to celebrate his scientific jubilee.

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## SPAIN.

By Dr. W. COROLEU.

THE Minister of War has done for psychiatry what no Secretary for Public Instruction has ever done. In the Spanish universities psychiatry is not taught at all. Now it has become compulsory for army doctors to take up some special branch of medical work, and psychiatry is included. It is sad that such an important subject should be optional, but it is better than being ignored altogether. Dr. Fernandez Victorio, a well-known military alienist, who has distinguished himself by publishing a book on *Insanity in the Spanish Army*, has been appointed to give a psychiatric course at St. Bandilius Lunatic Asylum at Barcelona, where he is instructing some military students. As in former years a few students of forensic medicine, during their ordinary medical curriculum, have attended some lectures at the same asylum. This is all the psychiatric equipment they are provided with for their practice. No remedy for this reprehensible state of things is being suggested.

The Government has again interfered injudiciously with the asylums.

By an Order in Council the late Cabinet made the regulations for admission more stringent than ever. Moreover, there was a proposal which, if adopted, would empty our asylums of half their poor population. Our medical staff at the asylums are very poorly paid, and posts are often vacant for a long time. At last, after three attempts, a medical superintendent for the asylum at Gerona has been found in the person of Dr. Raiz Rodriguiz, well known in Spain for his philosophical writings.

Dr. Dolsa's death has bereft Catalonia of the *doyen* of alienists. He was the founder of the Psychiatric Institute at Barcelona, one of the first private asylums in the city. His son, also an alienist of renown, died a year ago. Dr. Dolsa, jun., had written several important psychiatric works showing adherence to the old school. He had also intervened in famous medico-legal cases, such as Willie's.

We regret to record the death of Dr. Bertran Rubio, a famous neurological specialist, who contributed on psychiatric subjects to various medical reviews and magazines. Although not an alienist himself he was a profound literary scholar, and made just use of his classical and vivacious style of writing in trying to dissipate some of the errors and prejudices of the public as regards insanity.

As a proof of the stagnation that reigns in Spain in all psychiatric matters, we may point out that at the last International Congress of Medicine at Budapest only one Spanish physician was present in the section of psychiatry.

Publications have been few. The *Spanish Phrenopathic Review* has entered its eighth year. It has no companion in the Spanish medical press. Its contents are not, however, all Spanish. It has often articles by South Americans. Dr. Salceran's *Archives of Neurological and Phreniatrial Therapeutics* is also in its eighth year. No new books on psychiatry have been published or translated. At the Medical Congress of St. James of Galice modern psychiatry was discussed but no progress made. The only satisfactory note in the deplorable state of mental science in Spain is in the good and reliable lunacy statistics published in the *Phrenopathic Review*. As this is compulsory work in the provincial asylums all credit is not due to them; however, the care taken is beyond praise. Private asylums do not publish their statistics, as in Spain great secrecy is observed regarding one's more personal affairs.

Lombroso was the subject of a lecture by the Professor of Forensic Medicine in Barcelona. A course of lectures, also in Barcelona, on anthropology and criminology, by Dr. Tambard, was the occasion of political turmoil. Some people were at pains to find in them heretical and anarchistic ideas.

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## Epitome of Current Literature.

### 1. Physiological Psychology.

*Reverie and Delusions of Grandeur* [*Reverie et délire de grandeur*].  
(*Journ. de Psychol.*, Sept.-Oct., 1909.) Borel, P.

If the reveries which are common to most normal people are analysed, they are found to contain all the ideas which when developed constitute the delusions of the megalomaniac. All such thoughts of richness, power, honour and the like are the intellectual expression of "self-feeling" (*senti-ment de la personnalité*), a feeling which is also manifested by certain acts and emotional reactions—pride, vanity, courage, ambition. Since these ideas of grandeur are simply the translation into images of this self-feeling, one would expect that they would follow an evolution in the individual life parallel with the growth of this sentiment. Such is found to be the case. In young children, the reveries bear on play and motor activities. From eight to fifteen years, ideas of riches, expensive clothes, large houses, etc., appear. Later, the sentiment gives birth to love of approbation, desire of praise, and parallel with this reveries of future greatness and glory. Still later, the feeling becomes broader and is associated with the personality of others. At this epoch, altruistic reveries appear which attain their full development in the so-called "paranoia reformatoria." With the expansion of the intelligence reveries of invention and intellectual expansion become manifest. This is the basis of the so-called "P. inventoria," and is also observed in obsessional cases. During puberty also the sentiment of the personality associates itself with sexual feelings leading to amorous reveries. In the earlier years of this period, the thoughts consist chiefly of ideas of a future home, etc., but later they become much more systematised, and consist of romances of love and seduction in which the dreamer plays the chief and usually successful rôle.

The writer then proceeds to discuss the psychological characters of these conditions. The common characteristics of all reveries are the turning of the attention from external stimuli and the more or less automatic course of the representations. Reverie is favoured by solitude, music, monotonous sounds, lectures, conditions in general leading to fatigue of the attention. It appears most often before sleep, in the hypnagogic states when the attention is weakened and dispersed, or in the period following waking when the attention is not yet established. Contrasted with dreams, reveries always show evidence of mental synthesis, a construction of representations implying a retained consciousness of the ego, transformed momentarily into a superior personality. In some individuals the day-dreams, instead of being variable, continue one upon the other from day to day, forming a complicated romance. Such attain their greatest development in children, and are more common in women than men.

Attention is next directed to the pathological aspects of the subject. In some delusional states, the expansive ideas have precisely the same characters as reveries of ambition. Krafft-Ebing has described the case of an epileptic in which ambitious crises replaced the convulsive



phenomena. The patient would abandon himself to romantic ideas which soon became accentuated to the intensity of hallucinations, with complete disorientation and abstraction from reality. In psychasthenics also states of reverie are not infrequent, in which the mind becomes detached from actual reality and is occupied entirely with images and internal experience. As Janet pointed out, such individuals, habitually depressed, gloomy, dissatisfied with their actions, unable to gratify the sentiment of personality by efficient adaption to reality and social life, seek to express it by the development of ambitious reveries and ideas of grandeur.

Here, then, is a psychological phenomenon which exacts mental activity much less elevated than attention to real life and action, and, moreover, tends to turn away the dreamer from the real difficulties which he has to surmount. By an exercise of attention these reveries are recognised as illusory and the necessary adaptation to reality regained. With a more prolonged lowering of the psychological "tension," however, the reverie invades the real life of the subject so that he cannot distinguish the one from the other, the ideas of grandeur expressing themselves without contradiction from reality, and leading to a complete transformation of the personality.

H. DEVINE.

*The Analysis of Dreams* [*L'Analyse des Rêves*]. (*L'Année Psychologique*, 1909.) Jung, C. J.

This paper presents clearly and briefly the main principles enunciated by Freud as to the psychology of dreams.

The contents of dreams, instead of being the product of accidental and senseless associations, or founded entirely on somatic sensations during sleep, are actually definite products of mental activity and accessible to a systematic analysis. The organic sensations are not the cause of the dream but only play a secondary rôle, and merely furnish the material for the psychic experience. The dream has its antecedent chains of associations and its own significance like every complex psychic product or volitional act. The apparently obscure and confused images of the dream are the curtains behind which is the essential idea or *latent content* of the experience. The dream has, therefore, something individual conforming to the psychological disposition of the subject, such disposition being itself the result of the previous psychic life.

Our life is spent in a struggle for the realisation of our aspirations. Many such wishes (complexes) meet with resistances preventing their fulfilment, e.g., they may be disagreeable to the personality, which seeks to suppress them. Such complexes, however, which cannot find real expression, do so in other ways, one of which is in dream states. Every dream, therefore, represents the fulfilment of a suppressed wish, not usually directly expressed, but clothed in some fantastic or symbolic guise. This principle is capable of very wide application, for not only do ungratified complexes obtain expression in dreams, but also in waking states by various symbolic acts and thoughts.

The writer illustrates these conceptions by two examples, one of an actual dream and the other happily chosen from Goethe's *Faust*.

H. DEVINE.

*The Conception of the Subconscious.* (*Journ. of Abnormal Psychol.*, Feb.-March, 1910.) Hart, B.

While the conception of the subconscious has been of undoubted utility in furthering the progress of psychiatry, considerable disagreement exists as to the precise meaning to be attached to the term, notably as to whether a subconscious process is to be regarded as a mental or physical phenomenon. The conception denotes an attempt to regard mental experience, which is apparently disconnected and irregular, as a continuous and regular series of processes.

The first important contribution towards such an end was that of Janet's, who demonstrated that a large number of morbid phenomena could be explained by assuming the existence of dissociated mental elements outside of the personality. This view has been developed by Morton Prince, who divides psychological material into that of which the individual is personally conscious and that of which he is not personally conscious. The latter he subdivides into co-conscious (Janet's subconscious, *i.e.*, ideas dissociated from the personality) and unconscious elements—memory, traces, etc.—which are not at the moment actively functioning.

Now while most writers are ready to consider consciousness psychologically, many regard the subconscious from a purely physiological point of view, *i.e.*, as brain processes which have no mental accompaniment. The main object of this paper is to demonstrate that the question as to whether the subconscious is a brain fact or a mind fact is based on a misconception, and that the solution of the question is obvious when the meaning of the terms is correctly apprehended.

The author first devotes consideration to the general nature of scientific concepts. He shows that a scientific law is purely conceptual in character, enabling some portion of human experience (phenomena) to be classified into sequences, and reducing an indefinite number of sequences into a single formula. A scientific law is therefore valuable as a working hypothesis, enabling us to resume our sense impressions and predict future occurrences. Bearing this in mind, it becomes apparent that when one distinguishes between mental and material, the distinction is purely conceptual. On the phenomenal plane, the same entities are being dealt with, *viz.*, sense impressions. The physicist resumes his sense impressions by means of a conceptual model involving time and space, the psychologist regards them as actual or potential constituents of a consciousness.

Now while both conceptions have their value, a not uncommon error is to jump from one conception to the other, *e.g.*, the psychologist fills up the gaps in his chain of cause and effect by introducing physiological conceptions such as nerve-cells and currents. The conceptions of psychology, however, must all be constructed within the psychical series. Therefore the term "subconscious," which has been devised to explain mental phenomena, must be regarded as a psychological conception.

Coming now to the most important applications of the term in question, it becomes apparent that Janet, in his "subconscious," is dealing with phenomena and not conceptions. In the same way that

one infers consciousness in others from their speech and actions, so Janet infers dissociated mental elements in his patients from the observation of such phenomena as automatic writing and the like.

On the other hand, the subconscious of Freud is non-phenomenal, it is conceptual in character. He has imagined certain entities (complexes, unconscious ideas and effects) which have certain properties. He has found that the facts of consciousness can be explained by conceiving the existence of such complexes. An unconscious idea is, on the phenomenal plane, an impossibility, as are the atom and ether of the physicist. None of them have phenomenal existence, they are not facts of experience, they are simply devised to explain and predict experience.

The relation between Janet's subconscious and Freud's unconscious is not therefore one of rivalry. The former is a description of phenomenal facts—the phenomena of dissociation—and the latter is a conception which has been devised to explain those facts.

In the light of these observations the writer makes it clear that the term "subconscious" has been employed for three distinct categories of facts, and would group them under the following headings :

- (a) Marginal elements of consciousness (subconscious of Stout).
- (b) Dissociated elements of phenomenal consciousness (co-conscious of Morton Prince and subconscious of Janet).
- (c) A non-phenomenal conceptual construction designed to explain the facts of phenomenal consciousness (the unconscious of Freud).

H. DEVINE.

*Experiments to determine Co-conscious (Subconscious) Ideation. (Journ. of Abnormal Psychol., April-May, 1908.) Prince, Morton.*

In this paper, the writer draws attention to the difference of opinion which exists as to the interpretation of the manifestations of the subconscious. More especially he attacks those writers who hold the view that these manifestations "are compatible with the interpretation that they are the result of physiological processes without any association with ideas whatsoever." In support of the psychological interpretation, *viz.*, that co-conscious (subconscious) manifestations are the expression of subconscious ideas more or less dissociated from the personal consciousness, the writer describes several experiments carried out by himself on cases of multiple personalities, giving both simple and more elaborate tests in co-conscious perception and reasoning. In addition, there is a short description of one of a series of experiments carried on in conjunction with Dr. Frederic Peterson, by means of the psychogalvanic reaction method, with a view of demonstrating the presence of subconscious emotions of which the subject was unaware. The reader must be referred to the paper itself for details of these experiments, which do not lend themselves to epitomising, but which substantiate Dr. Prince's conclusion, *viz.*, "that such perceptions, interpretations, calculations, and translations could have been made by pure *physiological processes without thought* is inconceivable, and not substantiated by anything that we know of physiological processes."

G. F. BARHAM.

## 2. Ætiology of Insanity.

*On the Inheritance of the Diathesis of Phthisis and Insanity; a Statistical Study based upon the Family History of 1,500 Criminals. (Drapers' Company Research Memoirs; Department of Applied Mathematics, University College, London; published by Dulau and Co., price 3s., 1909.) Goring, C.*

Apart from its intrinsic value as a notable contribution to a subject of very great scientific importance, Dr. Goring's essay is of much interest as an example of the immense possibilities of the prison population as a field for biological and bio-social research. The material which forms the basis of the paper has been drawn from the data accumulated in the extensive anthropological survey of the convict population, which has been in progress for some years past under the direction of the Prison Commissioners. It consists of a series, collected by the author, of 723 family histories of convicts, concerning which definite information was given in each case as to the occurrence or non-occurrence, in parents and children, of pulmonary tuberculosis, and of a series, similarly collected, of 1,433 histories in which corresponding information was given with regard to insanity. The author claims that this material may be regarded as a random sample of the general population as far as the diseases under consideration are concerned, and that it therefore supplies the direct evidence needed to control the conclusions of Pearson and Heron, which were partly based on assumptions as to the prevalence of these diseases in the general population.

Working on this material by the usual biometric methods, Dr. Goring reaches the following conclusions:

(1) The tubercular diathesis is inherited, and the intensity of the inheritance factor lies between 0.4 and 0.6, being thus about the same as with all other physical characters in man.

(2) The prevalence of tuberculosis in the population—taking the duration of individual life as the unit—lies between 8 *per cent.* and 10 *per cent.*, and is probably nearer the lower limit.

(3) In the class dealt with there is no evidence of marital infection.

(4) There is no definite evidence that the correlation between parents and offspring is greater in the poorer classes, where environment would increase the liability to infection.

(5) The importance of the hereditary factor as opposed to direct contagion in the causation of phthisis is further supported by the facts (a) that the prevalence of phthisis amongst children of infected mothers is not appreciably greater than it is amongst the children of infected fathers; (b) that the prevalence of phthisis amongst workers exposed to constant infection in a consumption hospital has been found to be not significantly greater than amongst individuals with the same degree of diathesis in the general population.

(6) The criminal data confirm Heron in his conclusion as to the inheritance of the insane diathesis, and present a correlation between parents and offspring sensibly the same as the correlation in phthisis.

(7) The prevalence of insanity—the life of the individual being taken as unit—appears to be somewhat greater (lying between 3 *per cent.*

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and 4 *per cent.*) than the value assumed by Heron, or else it is greater in criminal stock as distinguished from the normal population.

An appendix to the paper gives some interesting data regarding marital correlation for "insanity," "phthisis," "criminality," "alcoholism," and "freedom from constitutional disease." In relation to each character considered the cases are classified according to social status, and it is found in most instances that the value of the correlation co-efficient consistently increases as we pass upwards in the social scale; the inference drawn from this fact is that in the socially better classes the influence of assortative mating makes itself felt. With regard to the individual values found, it may be noted that the co-efficient of marital correlation for insanity in all classes was ascertained to be 0.06, for criminality 0.2, and for chronic alcoholism the extraordinarily high figure of 0.7.

W. C. SULLIVAN.

*The Influence of the Brain on the Development and Function of the Male Sexual Organs* [*L'influenza del cervello sullo sviluppo e sulla funzione degli organi sessuali maschili*]. (*Riv. Sper. di Freniat.*, vol. xxxiv, fasc. 2-4.) Ceni, C.

Professor Ceni has during recent years been studying the influence of the cortical centres upon the phenomena of generation and perpetuation of the species. In a former communication, he described the effect of operative destruction of the cerebral cortex upon the sexual life and general health of fowls, and drew attention to a peculiar condition of cachexia accompanied by extreme atrophy of the testicles which beset the animals operated upon long after they had recovered and lived in an apparently normal manner for a period of one to two years.

The present communication gives the result of a large number of experiments which aimed at determining the nature of the atrophic process in the sexual organs, the relation between the atrophy and the operation (removal of one hemisphere down to the basal ganglia), and the influence exerted upon the atrophic process by the age, and more especially the precise state of development of the genital organs with respect to the time of operation.

Sixty young cocks about three months old, *i.e.*, with immature sexual organs, and forty-one about eighteen months, sexual organs completely developed, had one cerebral hemisphere removed during the months of maximum sexual activity (April and May). Of the former, twenty-one died during the operation, and thirteen from shock within ten days. The remaining twenty-six recovered from the shock and survived the period of life in which the sexual organs normally acquire their full development.

Ten of these twenty-six failed to reach normal development, notwithstanding the healing of the wound by first intention and an abundant ingestion of food. They remained in a state of physical torpor and skeletal deficiency, accompanied especially by a notable arrest of development of the external sexual features. The bright feathers and the crests and wattles of normal cocks either failed to grow or appeared atrophic and scanty. They did not crow nor did they give any sign of sexual instinct whatsoever. In three which came to the *post-mortem*

table several months after the operation, the recognition of sex was impossible from external features. These ten cocks died or were killed at periods from three to nine months after operation. In all, the testicles were found greatly atrophied, and in some cases almost irreconisable. Those animals which were not killed died in a state of severe cachexia, which supervened in the latest period of their lives.

The remaining young cocks, having recovered from the traumatic shock, underwent an apparently normal evolution, and differed little, or not at all, from control animals, either in external appearance or in sexual instinct and capacity. Four were killed, five, eight, ten, and fourteen months respectively after operation, and whilst in the best of health. Their testicles were found to be normal in colour, consistence, volume, and weight. Three fell into a state of progressive cachexia after fourteen to nineteen months of health and normal sexual activity. The testicles of these were markedly atrophied. The remaining nine were still alive after two years of almost normal sexual activity. The microscopic findings are still more noteworthy. Even in those which died within ten days after operation modifications were present in the size and form of the seminiferous tubules and the spermatogenic cells. The spermatozoa were much fewer in number than in control cases, and showed evidence of degeneration. In those which died from the third to the eleventh month after operation with external features of sexual infantilism, the microscope revealed a state of arrested development and even retrogression of seminiferous tubules and spermatogenic elements.

In those which developed normally and were killed at intervals from five to fourteen months after operation, the intimate structure of the testicles was normal.

In the case of the three young cocks which died in a state of cachexia after a long period of health and virility, remarkable alterations were found, indicative of an extremely destructive and atrophic process, affecting both the true glandular elements and the interstitial tissue.

Of the forty-one adult cocks, eleven died during the operation and nine during the following fifteen days without recovering from the traumatic shock. In the latter, the testicles presented a degree of atrophy, increasing from the third to the fifteenth day. Three died after twenty-two, twenty-five, and twenty-seven days in a state of progressive marasmus after having partly recovered from the shock, and the testicular atrophy in these was more marked.

Nineteen survived and gradually re-acquired their former vital and sexual activity in about thirty-five to forty days. Of these, five were killed after they had recovered from the shock, but before the sexual instinct was regained (four to twenty days), and in them a marked degree of testicular atrophy was found. Four were sacrificed from the thirtieth to the fifty-seventh day, *i.e.*, during the period of re-awakening sexual instinct and restoration of physical condition. Their testicles were normal in consistence and colour, but slightly below normal in weight. Five were killed after four, five, seven, ten, and thirteen months respectively, and in them the testicles presented a normal appearance. Of the remaining four, two died in a state of progressive cachexia after eighteen and twenty-five months respectively of health and sexual activity,

and in them an enormous degree of atrophy of the testicles was found. The other two were alive and well after more than two years. The histological findings in the testicles of these adult cocks are perhaps even more striking, and are fully described and figured by the author. In the case of the five killed after four to thirteen months, whilst in a state of complete restoration, the microscopic appearances were normal. In all the others atrophic and degenerative processes were in evidence. Even during the first few days after operation, the form of the seminiferous tubules and the disposition of the mobile elements (spermatocysts and spermatids) is notably altered as well as the pre-formed spermatozoa. When the traumatic shock is followed by progressive marasmus the above changes are accompanied by a necrobiotic process affecting all the elements of the tubules—fixed and mobile. The spermatocysts and spermatids are always most affected and first destroyed. When shock is recovered from and health gradually restored, the histological and physiological condition of the testicles returns gradually to the normal. When, after a long interval of health, the state of cachexia supervenes, the necrobiotic process in the testicles is extreme, and under the microscope the spermogenetic elements are seen to be completely destroyed and the interstitial tissue profoundly altered.

It is evident from these experiments that there is an intimate connection between cerebral integrity and normal sexual function. The precise nature of the connection it is as yet impossible to define. The results of cerebral destruction are both *immediate* and *remote*. In Ceni's opinion, the immediate phenomena cannot be related to traumatic shock, which is sometimes entirely or almost absent, especially in adult fowls, whilst in some cases they remain very prominent long after shock has been recovered from. They might be thought to be due to loss of the habitual physiological cerebral equilibrium necessary for the regulation of the general metabolism. This, Ceni remarks, is simply an hypothesis to be accepted with the greatest reserve. The remote effects are no less enigmatical. They certainly cannot be ascribed to disturbance of cerebral equilibrium, for the sexual organs have previously re-acquired their normal functional activity, notwithstanding the loss of a hemisphere, whilst the animal has shown, during a long intervening period, an almost normal equilibrium in the organic interchange. These animals, however, have a shorter life than usual, and die in a state of precocious vital exhaustion that reminds us of the involutionary phenomena of senility. This idea is merely a tentative explanation, and further researches are needed to throw light on these complex and important biological questions.

J. H. MACDONALD.

*The Influence on the Function of the Testicles exerted by some Substances which Act especially upon the Brain (Coffee, Veronal, Absinthe). [L'influenza di alcune sostanze d'azione prevalentemente cerebrale sulla funzione dei testicoli (caffè, veronal, absinthe).] (Riv. Sper. di Freniat., vol. xxxv, Fasc. ii-iii-iv.) Ceni, C.*

This paper gives an account of some experiments carried out on dogs to determine whether substances which alter the cerebral function without producing organic lesions in the brain are capable of inducing

functional changes in the testicles. Coffee was administered to three and veronal to two dogs, in doses sufficient to produce exterior manifestations, without compromising the life of the animals, for varying periods of time. The microscopic examination of the nervous system was negative in each case, whilst the findings in the testicles were always positive. The severest alterations followed the administration of coffee. The seminiferous tubules and spermatogenic elements at first show signs of involution or simple atrophy, and in the later stages a truly necrobiotic process is evident, resembling that found after ablation of a cerebral hemisphere. In the testicles of the two dogs subjected to the action of veronal the changes were less severe, and indicated an arrest of the spermatogenic process without determining a true involution of the elements.

In the case of dogs poisoned during fifteen days with absinthe, the histological findings were similar but less marked. Why coffee should exert such a powerful action on the function of the testicles as compared with veronal and absinthe it is difficult to explain, especially when we contrast the external manifestations of poisoning by these substances. It cannot be a direct action, else we should expect to find (*a*) the severest changes following absinthe, the deleterious effects of which, on the organism generally, are well recognised; (*b*) gross changes in the central nervous system in the case of coffee and veronal, which act selectively on the cerebrum. Ceni suggests that the action may be mainly *indirect*, and dependent on functional disturbances in the central nervous system.

J. H. MACDONALD.

*Tobacco in Relation to Insanity* [*Der Tabak in der Ätiologie der Psychosen*]. (*Wien. klin. Rund.*, No. 48-50, 1909.) Näcke, P.

The author prefixes to his cases an interesting summary of the somewhat conflicting modern opinions on tobacco as a factor in the causation of insanity. He thinks the tendency is to assign to tobacco a less serious part than formerly, greater care being taken to distinguish between the *post hoc* and the *propter hoc*. Ætiology is so complex that it is difficult to assign a precise place to nicotine. The abuse of tobacco can only in very rare cases be alone a sufficient causation of a psychosis. Näcke believes, however, that very exceptionally the chronic abuse of tobacco may produce a condition clinically corresponding to general paralysis (for he is not one of those who consider syphilis as an absolutely essential factor of this disease), and he accepts the case brought forward by Krafft-Ebing. He also agrees with Arndt and Schüle that, as in other cases of chronic poisoning, tobacco may enfeeble the nervous system, act as an intellectual and moral depressant, and even by affecting the germ-cells influence offspring. But, even as a merely co-operating cause, the misuse of nicotine in the production of psychosis is very rarely seen. In thirty years' psychiatric activity among a vast number of cases, Näcke has seen very few cases in which tobacco, to his knowledge, played any part at all, and never any case of pseudo-paralysis thus caused. He brings forward two cases he has recently met with in which tobacco was influential. The first was that of a cigar sorter (from age of sixteen) in a tobacco factory, and



himself a great smoker. There was some insane heredity on paternal side but otherwise his record was good ; no alcohol, syphilis, or trauma. He was, however, rachitic. At the age of twenty he became nervous, displayed fears and anxieties (at first in regard to diet), then highly irritable, and later violent and destructive, finally presenting "a classic picture of amentia," with confusion, hallucinations, and corresponding delirium. Two years after outbreak he left the asylum cured. On the physical side tobacco had at the outset produced definite neurasthenic symptoms as well as some amblyopia. The chief cause of the psychosis, Näcke concludes, was the abuse of tobacco. The second case was somewhat similar, though here the heredity was fairly sound, and smoking only began at nineteen, from which age cigarettes were consumed in great excess. At twenty he fell on a staircase and struck parietal region, being rendered unconscious, and later had another somewhat similar injury to head. There were neurasthenic symptoms, later culminating at age of twenty-five in a sudden outbreak of amentia, and for four days he was completely amnesic. Recovery took place four or five weeks later. In this case, Näcke holds that abuse of tobacco was one of several depressing conditions influential in bringing on the attack.

How does the use of tobacco affect the insane? Näcke has never seen any seriously bad results. Nor has he seen any evil effects from suddenly breaking off the habit. Rather more than half of the patients on the men's side at Hubertusburg smoke, nearly a quarter of these at their own expense. The cost per head for the others is less than four shillings a year, and Näcke considers that the money is well spent, as no luxury is cheaper or more appreciated.

Finally, Näcke brings forward a case of acute nicotine poisoning due to idiosyncrasy. The young wife of a clergyman went with her children to tea at the schoolmaster's, a man who smoked cigars all day long. Everything in the house smelled and tasted of tobacco, and on returning home the clergyman's wife suffered from headache and vomiting. For a week she was unable to eat, and for a month she was pursued by the hallucinatory odour of tobacco. One of the children suffered to a slighter extent.

HAVELOCK ELLIS.

### 3. Clinical Psychiatry and Neurology.

*Remarks on a Case of Obsession [Bemerkungen über einen Fall von Zwangsneurose]. (Jahrb. f. Psycho.-analyt. Forsh., Bd. I, 1909.)*  
Freud, S.

Freud here presents a fairly typical case, as psycho-analytically investigated, and accompanies it by many illuminative remarks of a characteristic kind. He observes at the outset that, contrary to what one might expect, the mechanism of obsession is more difficult to understand than that of hysteria. The victims of obsession conceal their condition as long as possible, seldom come to the physician, and then only at a very late stage. The patient in the case investigated—an intelligent young man of academic training—had had obsessional ideas from childhood, and in a pronounced form during the last four years. His chief trouble lay in the fears he felt concerning two people he had

great affection for, his father and a lady, while he also had impulses to cut his throat, and a tendency to make vows and rules in regard to trivial acts. He felt that he was wasting much of his life in fighting against these impulses. Freud traced back the condition to facts of childhood: he wished to see women he liked naked, but he had the fear that if he did his father would die. Though no obsession had yet arisen, there was a wish and an opposing fear, a painful emotion and an impulse to ward it off, and therewith Freud believes the inventory of the neurosis was complete. "More clearly than hysteria, obsessions may be traced back to the sexual life of childhood." It is the infantile part of life which becomes the unconscious element in the neuroses of later life. It thus comes about that there is what Freud calls a *mésalliance* between the contents of the idea and the emotion that accompanies it; between the reproach and the occasion for the reproach; so that to the lay mind it seems that the emotion is greater than the occasion warrants. That is not so, says Freud; the emotion is justified, but it belongs to other groups of mental ideas, which are unconscious and must be sought for. In this way obsessions, which seem as fantastic as dreams, become intelligible. It is necessary to ascertain when the obsession first occurred, and under what circumstances it recurs. Freud finds a simple illustration in a suicidal impulse of this patient, at a time when he was distracted in work for an examination, by the departure of the lady he was in love with to nurse her grandmother. "I should like to do away with the old lady" is his real thought, but it is at once followed by the command: "Do away with yourself for harbouring such a murderous thought." On another occasion, when this lady was about to leave the neighbourhood, he sees a stone on the road, and carefully removes it aside lest it should cause an accident to her carriage; then he returns and replaces the stone, saying to himself that the idea of an accident was foolish. But there was more than that in the action, Freud argues. A little before the patient had had a quarrel with the lady, and his actions with the stone really symbolised his love and his hate. A contradictory process of this kind is typical of obsession; it is always an opposition of love and hate, though the patient tries to rationalise it by introducing a secondary motive. This is theoretically interesting, because it represents a special type of symptom-formation, differentiating the neurosis of obsession from hysteria. "Instead of, as in hysteria, finding a compromise which covers both opposites with one representation, killing two birds with one stone, the two opposites are here satisfied separately, first one, then the other." In obsession, as thus understood, mere ideas come to the surface, robbed of the emotional contents, which yet are their unconscious motive force. Repressed hate, especially, the sadistic component of love, here plays a large part, as also in hysteria and paranoia. And when we have this conflict of love and hate the result is a partial paralysis of will and perpetual irresolution for all actions of which love should be the motive force. Such irresolution necessarily extends beyond that sphere. So we have the endless doubt of the victim of obsession, whose obsession is really an attempt to compensate that doubt and to correct the unbearable state of inhibition. The commands and prohibitions are attempts to set in action the choked energies in a transformed shape.

It is not possible to summarise the whole of this lengthy paper, for, like all that Freud writes, every page contains fruitful and original ideas or suggestions which demand attention and study, even though they may not always command assent.

HAVELOCK ELLIS.

*Delusions of Possession by Animals in a Case of Persecutory Mania*  
[*Delire de Zoopathie Interne chez une Persecutee*]. (Rev. de  
*Psychiat.*, Nov., 1908.) Vallet, A., and Fassou, A.

This paper records the case of a woman, æt. 37, of poor general intelligence and education, who, six years prior to admission to the asylum, developed symptoms of persecutory mania. She heard voices of an abusive nature, both at home and in the street; people pointed at her in passing; the police whispered to her to get a revolver to protect herself. She fancied she was electrified and chloroformed.

In the asylum she was quiet for nearly a year, but then became excited, and expressed the delusions of animal possession. She said the doctor and the police commissioner chloroformed her at night and introduced various animals into her belly through rectal and vaginal specula. The animals were mainly reptiles, vipers, lizards, crocodiles, etc. Later on she became a perfect menagerie, rats, dogs, weazels, monkeys, lions, and owls forming the fauna of her intestines. These animals feed on her intestines, the wounds they make healing like cracks on the hands; they live for varying periods, and at night the doctor removes the dead ones and inserts fresh animals.

She feels the movement of the animals most when she is up; they are quiet when she sits. When she closes her eyes she can best distinguish the various kinds.

Her health is good, there are no signs of visceral disease, and the only sensory disturbance is a slight general hyperæsthesia.

Suggestion and all other methods of treatment have proved useless in this case.

W. STARKEY.

*A Contribution to the Study of Suggestion in Mental Pathology. A Case of Family Insanity* [*Un Cas de délire familial*]. (Rev. de  
*Psychiat.*, Nov., 1908.) Schwartz.

A married man, æt. 34, was brought to the asylum by his wife and family. He was confused and disorientated, with persecutory delusions; thought he had sold his soul to the Devil, that his will had been taken away, and that his condition was due to the enchantments of a sorcerer living in the neighbourhood.

His wife firmly believed these ideas, and said the sorcerer had magnetised and paralysed her husband because he refused to pay him money for curing her of an illness.

The author states that the belief in witchcraft is still prevalent in the district, and he attributes the patient's insanity to the influence of such an environment on a man of weak intellect, and to the influence exerted by his wife and family on his mind.

He thinks this case exhibits all the factors which Lasègue and Falret consider essential for the production of *folie à deux*, viz. :

(1) The delusions are originated by the more intelligent, or at least the more active, of the individuals.

(2) The two individuals must live in close relationship, sharing the same pleasures, worries, etc.

(3) The delusions of the active subject must have an air of verisimilitude.

The treatment adopted in this case was : complete isolation from his wife and family, no visits being allowed, rest in bed, and baths to relieve the restlessness; reasoning with the patient to try to remove the delusions, and, later, cold douches to rouse him from his lethargic state. Recovery was complete in a month.

W. STARKEY.

*Juvenile General Paralysis and Spasmodic Paraplegia* [*Paralysie générale juvénile et paraplégia spasmodique*]. (*Bull. Soc. Clin. Med. Ment.*, Nov., 1909.) *Pactet, M.*

This paper records a case in which the diagnosis lay between dementia præcox with paraplegia and general paralysis. The patient was a youth, æt. 19, whose development up to the age of fourteen had been normal; there were no stigmata of degeneracy and no insane heredity. His education was fair, his health good, and his intelligence average. At fourteen years of age he began to deteriorate mentally, speech became hesitant, and his gait was affected. When brought to the asylum a year ago his articulation was impaired, his pupils unequal, knee-jerks increased, and gait uncertain. His mental state was one of general feebleness with some exaltation. There was no lymphocytosis in the cerebro-spinal fluid. The author had seen a similar case some years ago, which at *post-mortem* showed the lesions characteristic of dementia præcox and not of general paralysis. In this present case, however, the retention of a certain degree of psychic activity, the presence of emotional reaction and the affections, and the absence of the impulsiveness so usual in dementia præcox, confirm the diagnosis of general paralysis.

W. STARKEY.

*Obesity Associated with Changes in the Generative Organs and Tumour of the Pituitary Body* [*Le Syndrome Hypophysaire Adiposo-Génital*]. (*Gaz. des Hôp.*, Jan., 1910.) *Lannois, P. E., and Cléret, M.*

This article was written to show how lesions of the pituitary body associated with pathological or functional changes in the generative organs do produce an excessive formation of adipose tissue throughout the body.

Twelve cases in all are recorded, eight in women and four in men. The clinical accounts are minute and detailed, and in the majority of the cases accompanied by photographs, which give a very good idea the enormous obesity of the individuals under discussion.

The symptoms of the disease usually present themselves about puberty, or even as late as twenty-one. Heredity does not play an important part. In females, menstrual abnormalities are noted. Menstruation does not commence in some; in others, even if established, the menstrual discharge is scanty, and ultimately ceases at an early age.



In males, the genital organs are poorly developed. Visual troubles commence early, and all lead to more or less impairment of vision. Obesity is in all cases extreme, and shows itself about three years after the initial cerebral symptoms make their appearance. In contrast to obesity the result of feeding in excess, the neck is not particularly thickened. All the classical symptoms of cerebral tumour may be present—headache, vomiting, etc. The pulse is quickened, but the temperature lowered. The psychical phenomena are variable at the commencement of the illness, but later apathy and lethargy are always present, the patients having a “passion for sleep.”

The writers lay great stress upon the importance of radiography in making a diagnosis. If, together with the symptoms already mentioned, an enlargement of the sella turcica can be made out, the diagnosis is complete, but not before.

*Post-mortem* the ovaries are found to be sclerotic. The excessive fat is no protection against tuberculosis, as one patient died of the miliary form of the disease. The size of the growth involving the pituitary body is variable; it is usually of a sarcomatous nature. One case was due to traumatic lesions following a gunshot wound.

COLIN McDOWALL.

*Adenomatous Tissue in the Hypophysis; Pathological Sleep; Absence of Symptoms of Acromegaly* [*Struma adenomatosa dell'ipofisi; Sonno patologico; Assenza di manifestazione acromegaliche*]. (*Riv. di Patol. nerv. e ment.*, vol. xiv, fasc. 7.) Sandri, O.

Sandri, with the intention of contributing to the study of the function of the pituitary body, presents a case showing unusual clinical manifestations, and in which the whole of the gland exhibited pathological changes.

A countrywoman, æt. 48, was admitted to the clinique for mental and nervous diseases at Florence. Her family history was good. The illness of which she complained was of eight years' duration, and the signs shown previous to admission were, tired and depressed feelings and a bodily condition which left her easily fatigued. She had also vertigo and frequent and annoying headache. At first these symptoms were intermittent, but latterly they became more frequent and constant. A year previous to her admission to the clinique, the patient showed noteworthy intellectual weakness, indifference to surroundings, incapacity of attending to things, until she passed days immovable, silent, happy only when lying in bed, where she remained in a state of stupor. These symptoms developed still further, until, about two months before her first admission to the clinique, the stuporose state became that of somnolence, from which she awoke only to satisfy her vegetative requirements.

An examination on admission revealed in the ocular fundi white bilateral atrophy of the papillæ, which were more detached on the left side than on the right. The cerebro-spinal fluid was limpid, contained no albumen, and its centrifuged sediment showed a few lymphocytes. Otherwise the bodily functions appeared normal. The mental condition was as follows: the patient lay in bed wrapped in a sleep which

was only interrupted to satisfy the needs of vegetative life. When questioned she answered with sufficient precision, but the question had to be energetically repeated, otherwise the patient, after answering in a monosyllable, would relapse into sleep. Ideation was poor, perception slow, and memory somewhat uncertain and confused. Judgment was weak, and the patient did not respond to the news of her parents or show emotion in their presence. She complained of headache, heavy sensation in the skin of the head, vertigo, and ringing in the ears. Intractable vomiting occurred at times, and, despite every stimulus, she sank into a deep sleep from which she could not be awakened. Immediately before death symptoms of gastro-enteritis appeared.

At the autopsy, a tumour involving the whole of the hypophysis was found. This tumour was of greyish colour, slightly harder than the brain-substance and somewhat flattened at the base. It measured 6 cm. transversely and 4 cm. longitudinally. It tapered above, and was inserted immediately in front of the cerebral peduncles.

A histological examination presented a characteristic type of adenomatous tissue reproducing the structure of the epithelial lobe of the hypophysis, from which it took its origin. Sections of the whole tumour, in series, were made. It was not possible to observe any traces of the tuber cinereum, the mammillary tubercles, or the nervous lobe of the hypophysis. In the optic thalamus and in the cerebral convolutions, in immediate contact with the tumour, no neoplastic infiltration was found. The cells in these regions presented the same appearances as those of the frontal and occipital convolutions. Although the nucleus was central in many elements, it was swollen and uniformly coloured. The chromatic bodies were scarcely differentiated, broken, and rare; the yellow pigment was very abundant; the cellular processes coloured well, and were visible for long distances. In certain parts they were surrounded by abundant neuroglial nuclei. HAMILTON C. MARR.

*A Suggested Serum-diagnosis of Syphilis by means of a Chromatic Reaction [A proposito delle siero-diagnosi delle sifilide per mezzo di una reazione cromatica]. (Riv. di Patol. Nerv. e Ment., vol. xiv, Fasc. 7.) Turchi, G.*

The method of deviation of the complement applied in the serum-diagnosis of syphilis, of tabes, and of progressive paralysis by means of the examination of the cerebro-spinal fluid has assumed an undoubted diagnostic value. The reaction of Wassermann, however, presents some notable technical difficulties, and can only be carried out in a fully equipped laboratory. Various modifications have been suggested, tending to render the researches more accessible, but fortunately, studies directed to control the practical value of these modifications have demonstrated that they are almost all unacceptable. The methods of Porges and Meier, which were founded on the precipitation of lecithin and of glycocholate of soda, have been demonstrated non-specific and inconstant in researches carried out in the cliniques of Tanzi and Belmondo. Foreign and Italian literature ascribe the same defects to the methods of Klausner. At the same time, every new attempt to simplify the sero-diagnosis of syphilis is quite justified. The latest

methods suggested are those of Campana and Schürmann. The present paper is concerned with Schürmann's method. The theory that underlies this method is based on a chromatic reaction. Starting with the idea that in the reaction of Wassermann lactic acid plays a considerable part, Schürmann has made some researches on this acid in the serum by means of the known reaction of Uffelmann, but without any appreciable result. Turchi is of opinion that the colouring substances of the blood, contained in varying quantity in the different sera, masked in part the results of the chromatic reaction. To obviate this inconvenience he resorted to successive oxidation and reduction of the liquids to be examined, and after some preliminary researches propounded the following method :

"0.1 cm. of serum is placed in a glass tube. It is diluted in 3 cm. or 4 cm. of physiological solution (0.75 *per cent.* NaCl). To this solution a drop of perhydrol Merck (aqueous) is added, and the tube is shaken. This first part of the method, according to the author, gives some criterion in deciding if the serum examined belongs to a syphilitic individual. If the case is a positive one, there is an abundant precipitate. 0.5 cm. of the following reagent, freshly prepared and preserved in deep, well-closed bottles, is added : Phenol, 0.5 gr. ; sesquichloride of iron (purest) 5 *per cent.*, 0.62 gr. ; aqua destillata, 34.5 gr. The reagent, when prepared, should have a beautiful lilac colour. The serum of normal blood, with the addition of the reagent, shows on the surface a light green coloration, which on shaking either disappears completely or leaves a light green tint. The mixture always keeps transparent. The blood in syphilis, on the other hand, behaves in quite a different way. The addition of the reagent causes a greyish black, opaque colour ; the mixture is turbid and remains so after shaking. The reaction occurs in from one to two minutes. To the changes in colour which appear after this limit of time no definite significance should be attached. It is immaterial whether active or negative serum is used."

Schürmann examined by his method eighty-four sera. In all of these he has obtained results in accordance with the reactions of Wassermann. Negative results were obtained in two cases of sera of scarlatina—sera that some authors hold to have the power of giving, although very slightly and transiently, the reaction of Wassermann. Negative results were obtained in examining the sera of normal animals (rabbits, guinea-pigs, and sheep).

Turchi has made trial experiments on Schürmann's method. He points out that Biach instituted researches on eighty cases, and is of opinion that the method has no practical value. In Turchi's observations, which are tabulated in four tables, the Schürmann and Wassermann methods were used simultaneously. It was found that the chromatic phenomena may happen in the way demonstrated by Schürmann, but Turchi's conclusion is that Schürmann's method, as a means of sero-diagnosis in syphilis, is not acceptable in practice. It does not give either constant or specific results, and, as now employed by the author, cannot be accepted as a substitute for Wassermann's reaction.

HAMILTON C. MARR.

*Cholesterin in the Cerebro-spinal Fluid of Paralytics and its Participation in the Reaction of Wassermann* [La colesterina nel liquido cefalo rachidiano dei paralytici e sua partecipazione alla reazione di Wassermann]. (Extract from *Reforma Medica*, anno xxv, No. 3.) Pighini, G.

In a recent work, Pighini has demonstrated that cholesterin has, in an emulsion of nervous substances, the property of hindering the hæmolytic properties of lecithin and specific sera.

Starting with the hypothesis that in the cerebro-spinal fluid of general paralytics and in extracts of syphilitic foetal liver the antibodies and antigens in the well-known phenomena of Wassermann contain as their chief elements cholesterin, the author has made a research embracing the examination of various ependymal fluids and sera in several mental diseases.

Cholesterin is present in alcoholic extracts of the liver of a syphilitic foetus in much greater quantities than it is in the extracts of normal liver. Traces of cholesterin are present in normal blood, and are probably derived from the destruction of red blood-corpuscles, the stroma of which contains it in notable quantity. The amount diffused normally by blood ought to be slight. In ethereal extracts of 20 to 30 c.cm. of serum, the author has not succeeded in showing its presence, either by Liebermann's reaction or by microscopical examination for crystals. Cholesterin is not normally present in cerebro-spinal fluid; when present it is pathological.

The method followed in the researches is the following: Eighteen to 20 c.cm. of cerebro-spinal fluid, or of serum, are extracted twice with ether, using a glass vessel. The ethereal residue is disengaged by boiling in absolute alcohol, and saponified by shaking in sodium alcoholic solution (1 gr. of metallic sodium in 20 of absolute alcohol). The alcohol is then evaporated, salted water is added and mixed, and the liquid is evaporated to dryness. As a result salts are precipitated, which are powdered with a pestle and completely dehydrated *in vacuo*. The extracts are now placed in a Soxhlet apparatus and equal parts of absolute alcohol and ordinary boiling water are added. This mixture is reduced to small volume and left to crystallise slowly. In the alcoholic extracts thus obtained an oily, yellow substance is always present, which has avoided saponification, and which smells strongly of paracresol. It is soluble in all the solvents of cholesterin. When in small quantities it does not disturb the reaction and crystallisation. It is a substance, or rather, a mixture, which has been demonstrated chiefly by Panzer in his process of isolating cholesterin from various pathological organs. If it is desirable to avoid this in great part it is necessary to clear with neutral acetate of lead.

Cholesterin, when it is in sufficient quantity, is precipitated in long rhomboidal crystals, with characteristic angles— $76.3$  or  $87.3$ —or else in small traces ( $0.001$ ), with the reaction of Liebermann. When it is not possible to obtain at once a sufficient quantity of cholesterin, such as can be demonstrated microscopically, satisfactory results, especially for serum, may be got from the reaction of acid anhydride.

The cases investigated were ten of progressive paralysis, seven of



dementia præcox, five of epilepsy, two of apoplectic dementia, two of pellagra, two of moral insanity, and one case of alcoholism recovered.

The researches show—

(1) That normally cholesterin does not exist in the cerebro-spinal fluid and in the serum.

(2) Eight out of ten cases of general paralysis had cholesterin in the ependymal fluid, *i.e.*, 80 *per cent.* In five of these eight, crystals were demonstrated. In the two cases with negative results, the paralysis was of many years' standing, and in the last phases of the malady. In the serum the research was positive in 90 *per cent.* of the cases.

(3) In seven cases of dementia præcox, five, or 57 *per cent.*, showed cholesterin in the cerebro-spinal fluid. In the serum it was not demonstrated in any case. The reaction is more intense in catatonic forms, and in these cases crystals are very easily obtained.

(4) Five cases of epilepsy were examined, and a positive reaction was obtained in three cases, 60 *per cent.*, both in the cerebro-spinal fluid and in the serum. All three cases were those of marked epileptic dementia, or approaching dementia, and in which fits occurred daily.

(5) In the two cases of apoplectic dementia and in the two of pellagra, negative findings resulted in the cerebro-spinal fluid as in the serum.

Pighini's conclusions are that cholesterin is present as a pathological constituent in the cerebro-spinal fluid of cases of progressive paralysis, grave cases of dementia præcox and of epilepsy. It may also be present in abnormal quantities in the serum of general paralysis and marked epilepsy. It is probable that the prevailing active substance in the alcoholic extracts of the cerebro-spinal fluid and serum used in the researches of Wassermann is cholesterin. HAMILTON C. MARR.

*A Contribution to the Serum Diagnosis in Syphilis [A proposito di "una propaggine della sierodiagnosi della sifilide"]*. (*Riv. di Patol. nerv. e ment.*, vol. xiv, Fasc. 7, 1909.) Tommasi, C.

This paper deals with the method of Campana, which suggests as a specific reaction in syphilis with active manifestations special phenomena which are obtained from urine mixed with lecithin (when the urine does not contain albumen or mucus).

Campana's method: To 10 c.c. of fresh morning urine, filtered and collected in a well-cleaned glass, 20 drops of 1 *per cent.* suspension of lecithin are added. The urine is then agitated with a clean glass rod, which is moved rapidly from the top to the bottom of the glass until a homogeneous mixture is obtained. Three c.c. of a mixture of absolute alcohol and sulphuric ether, recently prepared, is added and mixed in a similar manner. The glass is then put vertically on to a support. It is noticed that the ether at first rises to the surface, and, if the urine is normal, the mixture remains opalescent. If the urine is that of a syphilitic person with active manifestations it changes colour, either suddenly or in from fifteen to thirty minutes. It is also more limpid and transparent. The reaction in this case is positive in nine times out of ten.

Tommasi has used the method in twelve non-syphilitic, in eight syphilitic cases, and in ten cases of general paralysis. He finds that

the reaction gives constant enough findings in syphilis with active manifestations, primary or secondary. In progressive paralysis the findings are not reliable, and are inconstant in the same individual.

HAMILTON C. MARR.

#### 4. Pathology of Insanity.

*Six Cases of Traumatic Encephalitis* [*Six Cas d'encéphalite traumatique*].  
(*Bull. Soc. Clin. Med. Ment.*, Nov., 1909.) Marie and Davidienkow.

This paper records the pathological findings in six cases of insanity following head injury. In four of the cases, the type of insanity was general paralysis, in one senile dementia, and in the other dementia præcox. In all, the site of injury was in the neighbourhood of the right temporal lobe, and the authors point out that this region is one very often injured, being exposed and fragile. The general paralysis followed the trauma at intervals varying from seven to thirteen years. In three of the paralytics there was a history of syphilis, and the fourth gave the Wassermann reaction. While the diffuse lesions were those characteristic of the dementia or paralysis, as the case might be, the local lesions were almost identical in all. They were superficial erosions, or excavations, whose bases and edges were formed of neuroglial scar-tissue. They are probably due to hæmorrhages, with necrosis of the superficial layers of the cortex, and the absence of blood-pigment in the cicatricial tissue is due to the fact that the pigment is completely absorbed after some years. Koppen has insisted on the exclusively traumatic origin of such lesions. According to him, whenever we find small cavities or superficial cicatrices (especially if these are on the bases of the hemispheres, or on the upper surface of the temporal lobes), we can be sure that we are dealing with lesions of traumatic origin. The paper is illustrated with twelve figures.

W. STARKEY.

*Causes of Death and Anatomico-Pathological Findings in the Insane* [*Über die Todesursachen und andere pathologisch-anatomische Befunde bei Geisteskranken*]. (*Allgem. Zeits. f. Psychiat.*, vol. lxxvi, No. 34.)  
Ganter, R.

This article is based on the results of examination of 1017 autopsies (513 males and 504 females) which were investigated from 1880 to 1904. The cases are grouped clinically as follows: General paralysis, 299 (224 males, 75 females); dementia præcox, 233 (98 males, 135 females); presenile disturbances, 77 (18 males, 59 females); senile dementia, 204 (75 males, 129 females); imbecility, 50 (20 males, 30 females); epilepsy, 87 (48 males, 39 females); recurrent insanity, 20 (2 males, 18 females); trauma 15 (13 males, 2 females); alcoholic insanity, 11 males; puerperal insanity, 12 females; tumour, febrile conditions, etc., 9 (4 males, 5 females).

The causes of death are set forth in tables showing the percentage of the different causes in each of the several mental conditions. Most of the patients died of diseases of the lungs (24.4 per cent.). Tuberculosis is next in frequency (19.8 per cent.). In dementia præcox (45 per cent.)

imbecility, and presenile disturbances the figures show that tuberculosis predominates. In paralysis and epilepsy death is chiefly assigned to fits, and in senile dementia to pneumonia.

HAMILTON C. MARR.

### 5. Treatment of Insanity.

*New Bromine Preparations for the Treatment of Epilepsy* [*Neuere Brompräparate in der Epilepsiebehandlung*]. (*Allegem. Zeits. f. Psychiat.*, vol. lxxvi, No. 1.) Haymann.

At the thirthy-ninth meeting of the Sudwestdeutschen Irrenärzte in Karlsruhe on November 7th and 8th, 1908, Dr. Haymann, of Freiburg, spoke on the use of different preparations of bromine in the treatment of epilepsy. For years experiments have been made with the object of discovering a preparation to take the place of bromide of potassium, so as to avoid bromism. Many of the preparations tried were useless; they either contained too little bromine or were absurdly expensive. Experiments have been carried on in the Freiburg Psychiatric Clinique with the newer preparations—brominin, neuronal, bromglidine, and sabromin. As a result sabromin is recommended for the treatment of epilepsy in all cases where the bromides of potassium cannot be used, with the exception of temporary excited conditions.

Further details are to be published in the *Medizinischen Klinik*.

HAMILTON C. MARR.

### 6. Sociology.

*The Value of the School as a Preventive of Criminality* [*Sull'efficacia della scuola nella lotta contro la criminalità*]. (*Il Manicomio*, vol. xxv, Nos. 1 and 2, 1909.) Bianco and Gandolfi.

This paper is a critical review of the question whether education is preventive of crime. The authors point out that a great change has come over informed opinion since the time when Guizot coined his famous epigram that the opening of a school meant the closing of a prison. So far from this optimistic prediction having been realised, we now see that in almost every country the spread of education has been attended with an increase in the amount of criminality; and those who defend the obscurantist thesis are able to quote statistics showing, as do those of Joly for France, that the wealthier and the better educated classes have a higher rate of criminality than the poorer and more ignorant, or they can even claim that in some countries, as, for instance, in Portugal, the least criminal members of the community are those who are most illiterate. While admitting the increase in criminality, and admitting, too, that there has also been an upward movement in prostitution (as to this the statistical evidence is not clearly indicated), in suicide, and in insanity, the authors dispute the conclusion that this is to be attributed to the coincident spread of popular education, and they argue that the facts are to be explained with more probability when

we take account of the growth of industrialism and of town life during the same period. As confirming this view, they point out that in Italy the increase in juvenile crime has been shown to keep pace with the increased employment of children and young persons in factories.

On the other hand, the writers of the paper freely admit that popular education as at present organised is not to any appreciable degree a moralising influence. Possibly it could only be so to a limited extent under any condition, as the effect of circumstances on character is practically confined to modifying its expression, and cannot alter its nature; but at all events a better attempt might be made to give moral education and to develop the emotions as well as the intellect. To attain this object, it is suggested that in addition to reorganising the schools it would be necessary to absorb into them more of the life of the children, so that they should become places of recreation and amusement as well as of instruction. In this way the child would be withdrawn from the influences of the home and of adult society, which, reflecting as they do the economic spirit of the moment, tend to foster criminal tendencies.

W. C. SULLIVAN.

*Sexual Education and Nakedness. (Amer. Journ. of Psychol., July, 1909.)*  
Ellis, H.

This paper, which is designed to form a chapter in the final volume of the author's *Studies in the Psychology of Sex*, deals with the psychological and ethical influence of familiarity with nakedness.

Public opinion on this subject has varied greatly from period to period. In Sparta, women practised dancing and gymnastics naked, and in the presence of men—a custom strongly approved and advocated by Plato. The Romans, on the other hand, regarded nudity as a licentious indulgence only to be permitted on the stage. Christianity, both early and recent, has tended to adopt a similar view. The primitive Church, in its desire to fight against the "flesh," fell into the error of confusing the subjective question of sexual desire with the objective spectacle of the naked form. There can be no doubt of the fact that it is the adorned body, not the naked body, which acts as a sexual excitant. Later, Christian missionaries have insisted, almost with ferocity, on natives adopting the clothing of Europe. It is this false feeling about nakedness which leads to the development of prudishness.

Nudity was, in mediæval times, practised to a considerable extent in public baths, etc.; but during the nineteenth century the revolt against it has been almost completely victorious. Its advocates have, however, never entirely disappeared, and in recent times a steady movement in its favour has made itself felt.

Nakedness was upheld for its æsthetic value by Stratz, but the majority of nineteenth century advocates have adopted the hygienic standpoint. Rikli established air- and light-baths more than half a century ago, and sun-baths are now common in Germany.

Those educationalists who are equally alive to sanitary and sexual considerations support the claims of nakedness as part of both physical and moral hygiene. Nakedness makes for the health of the body. Wherever primitive races have abandoned nakedness for clothing, at once the tendency to disease and degeneracy notably increases—though



other factors certainly enter into this. Familiarity with the sight of the body abolishes petty pruriencies, trains the sense of beauty, and makes for the health of the soul.

There is still a wide difference of opinion as to the limits to which the practice of nakedness may be carried, and also as to the age when it should begin to be restricted.

Gerhard points out that in this, as in many other matters of sexual enlightenment, it is the adult who needs education far more than the child. Parents educate their children in prudery, and flatter themselves that they have thereby promoted their modesty and morality. Forel, in his *Die sexuelle Frage*, adopts the same point of view.

The intense absorption of thought in the minds of many boys and girls concerning the physical conformation of the other sex, and the time they devote to the solution of this problem, is not generally realised. The fact that such matters are generally regarded as being in some way "wrong," and that therefore thoughts relating to them must be kept secret, tends, of course, to produce sexual excitement. If the knowledge were gained openly, no unwholesome results would follow.

Some progress in the desired direction is certainly being made. Not many years ago an English actress regarded as a calumny the statement that she appeared on the stage barefoot, and obtained substantial damages in an action at law. This is scarcely possible to-day.

James Hinton has "sought to make clear the possibility of a positive morality on the basis of nakedness, beauty, and sexual influence, regarded as dynamic forces which, when suppressed, make for corruption, and when wisely used serve to inspire and ennoble life."

BERNARD HART.

*Tuberculosis in the London County Asylums.* (*L.C.C. Arch. of Neurol. and Psychiat.*, vol. iv, 1909.) Mott, F. W.

In this interesting and important paper, Dr. Mott concludes from his researches that the evidence adduced does not support the contention that infection is one of the strongest causative elements in the prevalence of tuberculosis in the London County Asylums. Still less does it support the view that the causes of tuberculosis inhere in the asylums themselves, and not in the character of the patients sent to them. Ward incidence is not comparable with that shown by dysentery. If tuberculosis is communicable, it cannot be regarded as an infectious disease in the same sense as dysentery, smallpox, scarlet fever, etc.

The average proportion of living patients reported as tuberculous is 20 per 1,000 inmates. The incidence varies from 10·6 in Cane Hill to 40·3 in Claybury. With respect to the association of tuberculosis and mental disease, Dr. Mott comes to the conclusion that young subjects suffering from melancholia, dementia præcox, and imbecility are specially prone to the disease. This conclusion is confirmed by *post-mortem* statistics. A large number of general paralytics die with recent active tuberculosis which is not diagnosed during life. There is a relatively larger number of female general paralytics compared with male general paralytics affected by tuberculosis. Dr. Mott ascribes this state of affairs to the social conditions under which a large number of female general paralytics live prior to admission. Exposure to cold and wet,

insufficient nourishment, poverty, overcrowding, and alcoholism, combined with an inborn mental and physical deficiency in a considerable percentage, produce a suitable soil for the development of tuberculosis in the female sex.

In 14·8 *per cent.* of the autopsies made at the London County Asylums during the past five years, active phthisis was found. It cannot be shown that the variation in the incidence of tuberculosis in the various London County Asylums depends in any measure upon the class of patients received, the parishes from which they are taken, the construction and age of the asylums, or the dietary or treatment.

Comparing the death-rate for 1907 at the several age-periods in the sane and insane, the mortality from phthisis among the insane is highest at a much earlier period than among the sane. At the age-period of forty-five to fifty-five, when it reaches its maximum among the sane, it is a question whether the incidence among the insane is much greater than among the sane pauper population. The death-rate from phthisis for the insane from the age of fifteen to thirty-five is about five times that for the sane of the same age-period. The Jewish population at Colney Hatch (mostly aliens) shows a higher death-rate (25·7 *per cent.* of the total deaths) from tuberculosis, than the Christian. Dr. Mott accounts for this by the fact that Jewish patients are generally composed of aliens who have not been long in this country. They come from Russia for the most part, where they and their progenitors have lived in great pauperism and degradation, and, therefore, unlike the prosperous Jews whose progenitors settled in this country generations back, have already the seeds and soil of consumption in their bodies when they arrive in this country.

It is of special interest that the several London County Asylums officials do not contract tuberculosis from the patients.

From 1,892 necropsies made in Claybury during the past ten years, active phthisis was found in 20·9 *per cent.*, and the *post-mortem* statistics for the past ten years show that 51·6 *per cent.* of all the patients exhibited either obsolescent or active tuberculosis, or both. It was inferred from the *post-mortem* examinations that no less than 10 *per cent.* of the cases in active phthisis at autopsy could have acquired the disease in the asylum.

Infection of the disease depends upon dosage and resistance.

Dr. Mott concludes that the preventive measures against tuberculosis are good in the London County Asylums as regards milk, food, personal cleanliness, ventilation, clothing, warmth, and exercise in the open air, and the liability to infection is less than in the houses from which the majority of the insane are taken. He suggests the following additional measures, consistent with proper and due economy :

- (1) The earlier and more frequent diagnosis of active phthisis, with a view to isolation and treatment.
- (2) The adoption of the verandah system of open-air treatment in all asylums.
- (3) The encouragement of patients suffering from phthisis to expectorate into proper receptacles, which would possibly diminish the amount of intestinal tuberculous ulceration caused by auto-infection.

HAMILTON C. MARR.

### Part IV.—Notes and News.

#### THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE ordinary Quarterly Meeting of the Association was held, by the courtesy of Dr. Rothsay Stewart, at the Leicestershire and Rutland Counties' Asylum, Narborough, near Leicester, on Thursday, 24th February, 1910, Professor W. Bevan-Lewis, M.Sc., President, in the Chair.

*Present:* The President and the following twenty-seven members: David Bower, C. Hubert Bond, M. A. Collins, Thos. Draper, E. Faulkes, H. W. Hodgson, H. Hayes Newington, Th. Johnston, H. Kerr, Richard Legge, T. McDowall, H. J. Mackenzie, J. Rutherford Macphail, W. F. Menzies, James Middlemass, Ch. Mercier, A. Miller, W. F. Nelis, Bedford Pierce, R. C. Stewart, R. Percy Smith, J. G. Soutar, J. B. Spence, W. H. B. Stoddart, G. E. Shuttleworth, D. G. Thomson, G. Scott Williamson, and several others who did not enter their signatures.

*Visitors:* Mr. F. Perkins Pick, F.R.B.A., and Mr. R. L. Mackenzie-Wallis, B.A. *Apologies were received from Drs. Aveline, Beach, Bowes, Bowles, Ireland Bowes, Briscoe, Bullen, Caldecott, Carswell, J. B. Cooke, Dawson, Dickson, Langdon Down, Eager, Elkins, Gayton, Grünbaum, B. T. Hine, Hitchcock, Hotchkis, Robert Jones, Lawless, Lindsay, Maine, R. M. McIlraith, A. McDougall, W. F. and P. W. McDonald, Marr, Middlemass, Mules, Neil, Nolan, Oswald, Owen, Rainsford, Richards, Rogers, Rowe, Sankey, Sall, Sleiger, Steele, Stilwell, Steen, Street, Suffern, F. R. P. Taylor, A. Turner, A. R. Urquhart, Watson, Whitcombe, E. White, Wilkinson, Outterson Wood, Wolseley-Lewis, and Yellowlees.*

*Council attendance.*—The President, and Drs. Adair, Bond, Hayes Newington, Mercier, Miller, Mould, R. Percy Smith, Stoddart, and Vincent.

The minutes of the last Meeting having already been printed and circulated in the JOURNAL, were taken as read, and were duly confirmed.

*Election of new members.*—The following four gentlemen, whose names had appeared on the agenda, were balloted for and elected as ordinary members: Bartlett, George Norton, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, London County Asylum, Bexley (proposed by E. Faulks, G. Clarke, and C. Hubert Bond); Walters, John Patrick, M.B., B.Ch., B.A.O.(R.U.I.), Assistant Medical Officer, District Asylum, Melton, Suffolk (proposed by James Whitwell, S. G. Longworth, and C. Hubert Bond); Wilson, James, M.D., Ch.B.Glasg., Senior Assistant Physician, District Asylum, Hartwood, Lanarkshire (proposed by Neil T. Kerr, C. J. Shaw, and G. Dunlop Robertson); Younger, Edward George, M.D.Bru., M.R.C.P.Lond., M.R.C.S., L.S.A., Physician to the Finsbury Dispensary, 2, Mecklenburgh Square, W.C. (proposed by H. C. MacBryan, G. F. Barham, and C. Hubert Bond).

#### ASYLUM OFFICERS' SUPERANNUATION ACT, 1909.

Dr. Hayes Newington laid before the meeting the following Report of the Joint Advisory Committee:

#### REPORT OF THE JOINT ADVISORY COMMITTEE.

The Report of the Joint Advisory Committee, appointed by the Medico-Psychological and Asylum Workers' Associations, to consider the Superannuation Act, and to suggest, from the experience of the Associations, the best way of meeting any doubts or difficulties that might present themselves.

The Committee had before it the shorthand notes of an informal meeting held at 11, Chandos Street, on December 20th, 1909, for the same purpose. This meeting was attended by several medical superintendents and others connected with asylums. Free discussion of the whole Act was held, and various points

were raised. These and other fresh ones have been further considered by the Committee at later meetings. At all meetings Mr. Keene, Clerk to the Asylums Committee of the London County Council, was present, and gave the Committee assistance, information, and advice which were found to be very helpful.

*Classification of established officers and servants (Sects. 1 and 17—interpretation).*—The Committee recognises that the language of the Act very much narrows its opportunity of offering any suggestion on the assignment of officers to one or the other of the two classes constituted. It is also seen that the discretion in the partition of the staff, which is absolutely in the hands of the various visiting committees, with the consent of their local authorities, must turn, for the purposes of Sect. 1, on the meaning to be assigned to the expression, "have the care or charge of the patients in the usual course of their employment." Incidentally this expression will affect the other partition of staff into "established" and the residuum, as contemplated by Sect. 17. Looking to the definition of "established," it would seem to be contrary to the Act to place in the residuum any officer or servant who has the care or charge of patients in the usual course of his employment.

The Committee cannot suggest anything like a model classification, since while, as to the holders of certain offices there can be no doubt about their right to enter Class I, the varying duties appertaining in different asylums to other offices, bearing the same name generally, make it impossible to treat the occupants by fixed method. For instance, a case was stated to the Committee where laundresses did the whole work of the asylum alone, while in almost all others the laundresses have the responsible and trying care of patients in their work. In the latter case the care and charge of the patients is "in the usual course of their employment," for they would not be engaged unless they were prepared to assume such charge. The same argument may be extended to almost all, if not all, the doubtful cases where similar conditions obtain. The Committee wishes to point out that as to many patients who are set to work, it is impossible to say that they will not cause trouble at any time when working by reason of their insanity; while in acute cases, in whose interest work under care other than that of attendants is necessarily prescribed for the promotion of recovery, such care involves serious responsibility, which has to be taken as part of the "usual course of employment."

The Committee further points out that, in the opinion of those who have intimate knowledge of the working of an asylum, there are very few officials who have not in some way or other the "care or charge of the patients." Indeed, the rules of the asylum itself impress on every official, from the highest to the lowest, his responsibilities at all times and under all circumstances in regard to the inmates. This in itself constitutes a material difference between the onerousness of asylum service and its counterpart elsewhere. It is therefore felt that all such responsibility should be recompensed by assignment of the benefits of Class I, without which service with responsibility of a personal nature would be on the same footing as that of a poor law or civil servant having no such responsibility.

The Committee thinks that the term "permanent" in the definition of established officer or servant in Sect. 17 should not be considered to necessarily exclude officers and servants whose office is regarded as likely to be held by the occupant as long as he fulfils the duties of the office, whatever may be the terms of his engagement.

*Time of actual commencement of service for the purposes of the Act.*—Some questions arise as to this. In England, at least, the appointment and removal of officers and servants is entirely in the hands of the visiting committee, who meet so many times each year. The engagement of the lower orders of officers is, for convenience, performed by the medical superintendent, but subject to confirmation by the committee at its next or some succeeding meeting. Until such confirmation the officer might not be regarded as an established officer, but this point would be determined by the terms of his engagement. His pay, however, commences to accrue from the actual date of his beginning to serve, and, if he comes under the Act, contribution must be deducted. This question, which is a small one in this instance, assumes larger proportions when probation (in some cases lasting some months) is a *sine quâ non*. It seems necessary that a committee should provide for such a contingency. As, in case the probationer is found to be inefficient, the committee have power under Sect. 10 to return contributions on giving him notice to leave, all difficulty in regard to the latter ceases. In the matter of actual length



of service, any loss of time in the computation of service would be small in the case of those who serve up to the stipulated age. But in case of a claim either under Sect. 2 (1 and 2), or under Sect. 6, the time lost, should it be held that a probationer is not an established officer, might just debar him from justifying the claim on ten years' service under the former, and from aggregation under the latter.

Again, should the probationer not be held to be on the establishment, great hardship would arise in the case of those on probation at the commencement of the Act, Sect. 20 (1 and 2). It is suggested that to avoid this hardship in such case it would be wise that the committees should place all probationers on the established list on or before March 31st, 1910.

It is to be noted that the probationer, unless he is an established officer, will not benefit by Sect. 2 (4).

*Aggregation of service.*—It has been suggested to the Committee that a plan should be formulated, for general agreement by visiting committees, to facilitate the collection of contributions from an asylum liable to pay a proportion of any superannuation grant. It is possible that the Secretary of State, who would have to intervene in the event of disagreement between two visiting committees, will be asked to express an opinion upon such a scheme. It seems hardly necessary to suggest that in every case of the removal of an officer or servant from one asylum to another a formal certificate should be obtained by the receiving asylum; such certificate to state not only the exact length of service, but also its nature and the class to which the applicant belonged in respect of the division made by Sect. 1. It is suggested that this certificate should bear on it the written sanction of the Committee to the removal.

It was stated to the Committee that a legal opinion had been given that the words "first asylum" in line 8 of Sect. 6 should be read as "every asylum except the last." It is pointed out that, while there is ample power to enforce the payment of contributions from an asylum in respect of superannuation allowance, there is no such power in respect of the return of contributions under Sects. 5 and 10. In the former and in the second sub-section of the latter the Committee has discretion as to the return. In Sect. 10 (1) there appears to be no discretion.

*Source of superannuation allowance payments.*—Sect. 12 presents, at first sight, some difficulties. The object of the section is to provide the "ways and means" of paying superannuation allowances which heretofore have been paid out of the county or borough or analogous funds. Allowances granted under the new Act are to be provided out of the "asylum maintenance" funds, and it was therefore necessary to extend the operation of Sect. 283 of the Lunacy Act, 1890, so as to include pensions, etc., as part of the expenses of the "weekly sum" payable by Guardians and other bodies for patients chargeable to them. There appears, however, to be some inconsistency in the statement that the allowance is to be "paid out of the fund out of which the salary or wages and emoluments of the officer or servant is or has been paid," and the further direction later on that the weekly sum shall be sufficient to pay *all* such superannuation allowances, etc., etc. The words "paid out of the fund, etc., etc." were inserted as an amendment in the House of Lords, and the intention was to introduce them at the end of the section as a proviso, in which case there would have been less ambiguity. The object of the provision was that in the case of pensionable men working on "repairs" the local authority should pay the pension as they do the wages. It is suggested that the apparent contradiction may be met by reading after "all such superannuation allowances or gratuities" the further words—"for which the maintenance fund may be liable." Or it may, perhaps, be contended that although the weekly sum is to be sufficient to pay *in the first place* all pensions, this does not prevent recovery from the local authority of sums paid in pensions to "repair" men.

A question has been raised on this section in connection with the emolument of a house or lodging, whether such being provided out of the local authority's funds, a proportionate part of the pension (as represented by the house or lodging) is payable by the local authority out of the county or borough fund. It is thought that the interpretation of the word "emoluments" must be, in this connection, limited to emoluments which involve *payments* to an officer, such as are specially referred to in Sect. 16. A house or lodging would come under the expression of "money value," not "payment"; and therefore such proportion of the pension as is repre-

sented by the house or lodging would be properly payable out of the fund liable for payment of salary or wages.

*Contracting out.*—The Committee was informed that the practice under the Poor Law Officers' Superannuation Act is that a person contracting out can never come in again. It is thought that an asylum officer or servant contracting out under Sect. 20 would be debarred for all time from benefitting under the Asylum Officers' Superannuation Act. It is hardly necessary to emphasise how important it is for asylum officials to consider their position in this connection.

*Position of non-established officers and servants appointed after April 1st, 1910.*—It appears that such officers and servants will have no right to any pension either under the Lunacy Act or the present Act, the superannuation clauses of the former having been repealed, except in favour of those actually in the service at that date. This fact will doubtless be borne in mind by asylum committees before determining who shall not be established officers and servants.

*Schedule of value of emoluments.*—It has been suggested to the Committee that there is nothing to prevent this schedule being placed in conspicuous parts of the asylums in sections, should it be found desirable to do this.

H. HAYES NEWINGTON (*Chairman*).

G. E. SHUTTLEWORTH (*Hon. Secretary*).

#### PAPERS.

Mr. MACKENZIE WALLIS, B.A.Cantab., from the Physiological Laboratory' University College, Cardiff, and Dr. EDWIN GOODALL, F.R.C.P., Cardiff City Mental Hospital, read a paper entitled, "Electric Bath Treatment in 120 Cases of Mental Disorder; with Results of an Experimental Inquiry into the Influence of the Baths upon Excretion of Creatinine in Certain of Them."

The paper was illustrated by lantern-slides, and excited very lively interest.

In a good discussion which followed, the PRESIDENT, and Drs. PERCY SMITH, SCOTT WILLIAMSON, BEDFORD PIERCE, and STODDART took part. The SECRETARY read a communication from Dr. Robert Jones, detailing some experiences of the use of an electric bath at Claybury.

The authors replied.

"Typhoid Carrier Infection" was the title of a paper read by Dr. SCOTT WILLIAMSON. It was commented on by the PRESIDENT, who added some interesting allied reminiscences.

#### THE NEXT CENSUS.

Dr. BOND said the President had asked him to mention a matter which came up at the Council Meeting. Some time ago Mr. Byrne wrote from the Home Secretary's office asking if the Association would consider whether they thought, in reprinting the next census form, which would need to be done soon, the present column asking for information of every family as to whether they had any imbecile or feeble-minded member of it need still remain in, having in view the fact that the medical inspection of all school children was now compulsory. It was evidently in the minds of the Home Office that that compulsory school examination made it unnecessary to inquire in future as to whether there were any imbeciles or feeble-minded persons in the family. The matter had been discussed by the Council, who were of opinion that the column ought to be retained, but, as there was a somewhat small Council attendance, it was thought best to ask for the views of the Association on the subject.

Dr. PERCY SMITH said there must be a large number of families the children of which did not attend county schools in which there were inspectors. He did not think there were inspectors in all the private schools in the country. The column in question was put into the form with the object of ascertaining the sort of proportion there was of cases of the kind in the country, and he did not think it would be right to omit it now. The answer to the letter, he thought, should be that there were not, otherwise, sufficient data to enable a positive answer to be given to the question, and that they therefore were of opinion that the column ought certainly to be retained.

This was agreed to, and the meeting terminated.

Previously, during the day, members had been shown over the asylum by the architect, Mr. Perkins Pick, F.R.B.A.

In the evening a well-attended dinner was held at the Royal Hotel, Leicester, at which there were several visitors from the neighbourhood, including Messrs. H. P. Rodgers, Vice-Chairman of the Narborough Committee of Visitors; Geo. Rowlatt, Under-Sheriff for the county; Geo. Chitham, Mayor of Leicester; C. J. Bond, F.R.C.S., Mr. Perkins Pick, Drs. Astley Clarke, Pope, Macalister-Hewlings, Langworthy Laurie, and G. C. Franklin.

Dr. Astley Cooper kindly showed the members round the newly built and equipped Nurses' Home at the General Infirmary.

#### IRISH DIVISION.

THE Autumn Meeting of the Division was held at the Royal College of Physicians, Dublin, by the kind permission of the President and Fellows of the College, on Saturday, November 6th, 1909, at 2.30 p.m. Dr. Hetherington was voted to the Chair, and there were also present Drs. T. Drapes, G. F. Shepherd, R. R. Leeper, T. A. Greene, J. O'C. Donelan, M. J. Nolan, J. J. Fitzgerald, J. Mills, Dora Allmann, H. M. Eustace, J. M. Redington, and W. R. Dawson (Hon. Sec.). Expressions of regret for inability to attend were received from Drs. P. O'Doherty, F. O'Mara, O. F. McCarthy, and W. Graham.

The minutes of last meeting were read, confirmed, and signed, and the Hon. Secretary reported shortly on certain matters arising out of them.

The following was unanimously elected an ordinary member of the Association: John P. Cahir, M.B., B.Ch., B.A.O., R.U.I., Assistant Medical Officer, District Asylum, Ennis. Proposed by Drs. F. O'Mara, J. M. Redington, and W. R. Dawson.

The kind invitation of the Drs. Eustace to hold the Spring Meeting of the Division at their institution was unanimously accepted with thanks.

Dr. M. J. NOLAN reported on the present position of the Asylums Officers Superannuation Bill, and after some discussion it was agreed that an attempt should be made to secure certain amendments to Clauses 2 (1), 4, 11, 12, and 16. The following resolution was then proposed by Dr. Mills, seconded by Dr. Drapes, and passed unanimously:

"That the Irish Division of the Medico-Psychological Association desires to express to Dr. Nolan its heartiest thanks for his untiring work in attending in London at the different stages of the Superannuation Bill, and for his consummate skill and tact in the matter."

A letter was also read from Dr. W. GRAHAM, expressing high appreciation of Dr. Nolan's work in connection with the Bill, and suggesting that his expenses should be defrayed by the Division.

Dr. NOLAN thanked the Members and Dr. Graham, but said that his expenses had been in part defrayed by the Irish Asylum Officers' Superannuation Committee, and would be entirely so defrayed if the asylums which had not made their second contribution to the funds of that Committee would now do so.

A discussion took place at the instance of the Hon. Secretary on the desirability of appointing a Managing Committee for the Division. The question was decided in the negative.

The Divisional Committee for promoting interest in the work of the Association amongst the Assistant Medical Officers of Irish Asylums presented a report embodying suggestions with regard to the regulations for the proposed Divisional Medals, and also expressing the view that, as no response had been received to the invitation to send in collective reports, a further notice should be issued extending the time until the Summer Meeting of the Division. The report was adopted.

Dr. DONELAN read an account of "A Case of Hallucinations apparently due to Morbid Physical Conditions," which was discussed by Drs. LEEPER, DRAPES, DAWSON, and HETHERINGTON, and Dr. DONELAN replied.

THE HON. SECRETARY read a paper entitled "Some Points Concerning the Diagnosis and General Treatment of the Feeble-Minded." Drs. GREENE, MILLS, FITZGERALD, NOLAN, LEEPER, and HETHERINGTON spoke, and Dr. DAWSON having replied, the meeting terminated.

In the evening the members dined together at the Shelbourne Hotel.

## POST-GRADUATE CURRICULUM AND DIPLOMA IN PSYCHOLOGICAL MEDICINE.

The two following communications have been sent to all medical examining bodies in Great Britain and Ireland:

SIR,—I am instructed by the Committee of the Medico-Psychological Association of Great Britain and Ireland to approach the Universities and other examining bodies on the subject of post-graduate instruction in psychiatry.

It has long been felt by those most intimate with the subject that there is in this country no adequate systematic instruction in psychiatry. The evils of this neglect become year by year more and more manifest. This Association is impressed with the urgent necessity for post-graduate teaching in psychiatry in medical schools, and for the granting of a special diploma to candidates after examination, as has already been done with such conspicuous success in public health and tropical medicine. The position of psychiatry as a branch of medicine is unsatisfactory; it is not properly affiliated to other departments of medicine, to their mutual detriment; and under present conditions cannot make full use of those modern methods of research which have resulted in such advances in general medicine.

Young medical men, on their appointment as medical officers to asylums, find themselves face to face with work and problems of which they have had no previous knowledge, and in preparation for which they can obtain no systematic and scientific training or teaching. As is well known, lectures on psychological medicine and pathological laboratories have been established here and there, and in one or two universities chairs of experimental psychology have been founded; but there is no systematic course of instruction and no recognised diploma at the end of such course. It is submitted that the time has now arrived when such a course and diploma should be established in the principal medical schools of this country, and a diploma in the subject should be instituted by the examining bodies. My Association is of opinion that the institution of a diploma would impose a high standard of acquirement in the officers of asylums, would stimulate the scientific study of insanity, and would have an effect in widening and deepening our knowledge of the subject, comparable with the effect produced in public health and tropical diseases by the institution of diplomas in these subjects.

In this letter it is unnecessary to enter into details as to the time required for this post-graduate work and the subjects to be studied; probably each university and examining body will form its own views on these points. I may say, however, that my Association considers that the minimum period should be one year; that provisionally the subjects should be divided into (a) compulsory and (b) optional; that in the former should be included—(1) anatomy, physiology, and pathology of the nervous system; (2) psychology, normal and morbid; (3) clinical pathology; (4) clinical neurology; (5) psychiatry, systematic, clinical, and medico-legal. The optional subjects suggested are—(1) experimental psychology; (2) bio-chemistry; (3) bacteriology; (4) comparative anatomy and physiology of the nervous system; (5) eugenics. It is suggested that only one optional subject be required of candidates. The Council of my Association respectfully asks that its proposals may receive earnest consideration, so that in the near future it may be possible to place the teaching of psychiatry on a sound, scientific basis, and so bring it into line with other special departments of medicine in this country.

I am, Sir,

Your obedient servant,

CHARLES MERCIER,

*President (1908-9).*

The letter of the President of the Medico-Psychological Association on this subject has elicited many inquiries from Universities and other examining bodies as to the intention of the Association with respect to the scope and range of training and examination.

In response to these inquiries the following is submitted:

For many years those engaged in the practice of psychiatry have been profoundly dissatisfied with the lack of opportunity of teaching and training in this subject that are available for young medical men entering the speciality. This feeling



found expression on May 19th, 1908, when Dr. David Thomson, of the Norfolk County Asylum, read before the Medico-Psychological Association a paper on the subject which aroused the liveliest interest.

At the Annual Meeting, 1908, Dr. Thomson formally proposed a resolution to the effect that a scheme of post-graduate teaching and training in the subject was necessary, together with the institution of degrees or diplomas by the examining bodies. A committee was appointed to consider the matter. The first result of their deliberations was the letter to the examining bodies, which, having been ratified by the Association at annual meeting assembled, was duly forwarded to every examining body in the Kingdom. The Committee consisted of Drs. McDowall, Morpeth (chairman); Bevan Lewis Wakefield; Whitcombe, Birmingham; Percy Smith, London; Robert Jones, Claybury; Bedford Pierce, York; David Orr, Manchester; David Thomson, Norwich. To these were added subsequently Drs. Stoddart, London; Rows, Lancaster; Bond, Epsom; and Mercier, London.

It may be desirable to recapitulate the main points in Dr. Thomson's paper:

Firstly, whereas in other special departments of medicine, such as public health, tropical medicine, military and naval surgery, there are recognised and complete courses of post-graduate teaching and training at some of the great medical schools, and degrees or diplomas are given by most of the examining bodies, yet in the special and important department of psychiatry no such course of training and teaching, no degree except in two Universities, and no diploma is available.

Secondly, the young medical men who take up this department of medical work do so without being trained for it; and once engaged in asylum service they are usually too distant from centres of education and too much absorbed in routine duties to acquire a knowledge of the prolegomena of psychiatry or of modern methods of research.

It is to remedy this anomalous state of affairs that the Medico-Psychological Association now approaches the examining bodies. The defects to which attention has been drawn are felt both keenly and widely, and the Association has confidence that the great advance in knowledge and efficiency of practitioners that has followed the institution of degrees and diplomas in public health and tropical medicine will be equalled by the advance that will follow the institution of degrees and diplomas in psychiatry.

It may be fairly assumed that the Legislature will have as much reason to enact that medical officers of institutions for the insane shall be properly trained, taught, and qualified, as it had when it made the holding of a diploma in public health legally essential to obtaining a medical officership of health of a town or district containing more than a certain number of inhabitants.

From the general tenor of the discussions on Dr. Thomson's paper it could be gathered that, in principle, the proposal is unassailable; but the difficulties of carrying the scheme into practical effect are considerable.

Some of the more obvious are:

(1) The isolation of many asylums and their distance from large towns and teaching centres.

(2) Certain inherent peculiarities of asylum work *under present conditions*, e.g., enforced residence as medical officers for an indefinite number of years, celibacy, uncertain promotion, the attitude of certain committees of management towards the medical aspect of asylum work.

(3) The difficulties of arranging a post-graduate curriculum, part of which must consist of holding a resident appointment in an asylum.

We believe, however, that these difficulties are not insuperable; in fact, the Association has for many years granted, after examination, a certificate of competency in the subject, which has been sought after and obtained by many, but the time has now come when the matter is too important to be left in the hands of a private body.

#### SUGGESTED REGULATIONS FOR CURRICULUM AND DEGREE OR DIPLOMA IN PSYCHOLOGICAL MEDICINE.

In response to its circular letter, the Association has received from various examining bodies requests for information as to the curriculum it would propose.

Under these circumstances the Association makes the following suggestions to those examining bodies who have asked for guidance on the subject.

The Association suggests :

(1) That the candidate must be a registered medical practitioner of not less than two years' standing at the time of examination.

(2) That the candidate, subsequent to qualification, must have been in the practice of a recognised institution for the insane for not less than twelve months, that is to say, he must have held a whole-time appointment therein as medical officer or clinical assistant for that length of time.

(3) That the candidate must produce evidence that he has attended, subsequent to qualification, courses of lectures and practical instruction on the following five compulsory subjects, or that he has otherwise diligently studied the same :

(a) Neurology : the anatomy, physiology, and pathology of the nervous system

(b) Psychology.

(c) Clinical pathology.

(d) Clinical neurology.

(e) Psychiatry, lectures and demonstrations on, and the jurisprudence of psychiatry.

And on one of the following five optional subjects :

(a) Advanced psychology.

(b) Bio-chemistry.

(c) Bacteriology.

(d) Comparative anatomy and physiology of the nervous system.

(e) Eugenics.

(4) That the curriculum should consist of three terms of approximately three months each, or equivalents of these periods to suit local terms or sessions.

Having regard to the important position of neurology to the other subjects, it is believed that it will be necessary to devote not less than one third of the time of the extra-institutional part of the curriculum to its study.

A syllabus detailing the scope of the subjects enumerated above will doubtless be made by each examining body, but a model syllabus is in course of preparation.

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#### FOREIGN DIFFICULTIES.

THE *Standard* of March 15th reports that 280 patients have been discharged from the public asylums of Bohemia owing to financial difficulties. These arise from political complications preventing the Budget being passed, so that the Provincial Government has been impelled to this extraordinary course. The criminal insane will in future be confined in prisons because they are found to be far cheaper than asylums, and this enforced economy has also suspended all building, and stopped all subventions to charitable institutions.

From St. Petersburg it is reported that the patients in the asylum have become so numerous that beds cannot be found for them, and the staff is subjected to the greatest difficulties in management. Indeed, a short notice in a German newspaper makes a statement of a nature implying a want of all decency and ordinary comfort such as can hardly be believed in this country. The *Lancet* says that Professor Bechtereff, President of the recent Congress of Russian Psychiatrists, has given a similar account of the terrible position of the neglected patients, and according to Dr. E. V. Erickson the condition of the insane in Poland is most unsatisfactory.

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#### COMPLIMENTARY.

##### PRESENTATION PORTRAITS TO DR. CLOUSTON.

A NUMEROUS company of ladies and professional gentlemen assembled in the hall of the Royal College of Physicians, Queen Street, yesterday afternoon, on the occasion of the presentation of portraits of Dr. Clouston, subscribed for by friends in recognition of his long connection with the Royal Edinburgh Asylum for the Insane. In the absence of Mr. Adam, Chairman of the Managing Board of the Asylum, Professor Rankine presided.

The CHAIRMAN said he occupied that position because for over twenty years, as a Manager of the Royal Edinburgh Asylum, he had been associated with Dr. Clouston in its administration, and during that period his feeling had been one of ever-growing admiration for him as a physician, as a man of business affairs and as a friend. Dr. Clouston had attained a most eminent position as an alienist, and that his fame had gone through all the earth was well illustrated by the list of subscribers to the testimonial. As an administrator there were three noteworthy features which he would mention. The first was the initiation of that mental pathological scheme which had done much, and would do still more, for the advancement of psychiatric science. The second notable event which one liked to recall was the smooth way in which the very onerous contract with the Poor-law authorities of Edinburgh was altered into the agreement upon which the matter now rested. That agreement was largely due to the good sense of the Parish Council of the time, but it owed its initiation and most of its success to the diplomacy of Dr. Clouston and the late Mr. Ferrier, who was then parochial inspector. But above all, tangibly, at least, Dr. Clouston's monument rested on Craighouse, that magnificent pile of buildings which was unsurpassed by any in the Kingdom. The best proof of the success of the scheme and of the prescience of Dr. Clouston was that while he began in the East House in 1873 with sixty paying patients and a bare income of £8,600, when he left the institution there were at Craighouse 220 paying patients and an income of £35,000; and better still, from the business point of view, the huge debt which lay upon the scheme was disappearing with most gratifying regularity. (Applause.) It was a very sad hour to the managers when two or three years ago Dr. Clouston intimated his intention to retire. At the same time, they felt that, after a career of thirty-five years as superintendent of the Asylum, Dr. Clouston had well earned a period of comparative repose, and they all hoped he might long continue among them, not an idle man, but not tied down to the daily care of a great institution. (Applause.) Of Dr. Clouston personally, he would only say that it astonished the managers to see the buoyancy and cheeriness which he brought to bear upon what must have been at times depressing work. (Applause.) He concluded by calling on Principal Sir William Turner to unveil the portraits.

Sir WILLIAM TURNER said he might call attention to one or two points in Dr. Clouston's career which had assisted him largely in attaining the position of a great specialist. His acquaintance with Dr. Clouston dated from 1861, the year in which he took the degree of Doctor of Medicine in the University of Edinburgh, and presented a thesis for the excellence of which he was awarded by the Faculty of Medicine the gold medal. It was a thesis on "The Anatomy and Physiology of the Nervous System in Invertebrate Animals." In that year the youngest pathologists and physiologists had been doing their best to unravel the mysteries of the nervous system, a task of great difficulty, because the methods then in use were crude to a degree. He (Sir William) drew from that thesis and its subject the moral that Dr. Clouston's mind, in his early professional life, was bent on a certain kind of medical research—an inquiry into the nervous system and its functions. At that early period he recognised the line which he should follow in his professional career, and they were there to testify how well he had followed it. Shortly after obtaining his degree he was appointed one of the assistants of the Morningside Asylum, and in 1873 he became the physician superintendent. In 1879 he was appointed the sole lecturer on mental diseases to the University of Edinburgh, and that marked another very important advance in his career, because he could combine with his work as a teacher his practical experience as the head of the great Edinburgh asylum. It was a great point in medical education that with the theoretical instruction there should always be combined the practical methods in applying theories in the elucidation of disease. Dr. Clouston was, therefore, in a position to become a great teacher of his subject and a great trainer of physicians who were to take up as their practice mental diseases. They all knew how well he had succeeded in his theoretical and practical teaching. No man had trained so many who had been and who were still superintendents of asylums as Dr. Clouston, and they had in these pupils practical illustrations of what his power was over the young men who came under his charge. There was another point bearing upon Dr. Clouston's scientific work, and that was his power of illustrating his ideas by his pen. His professional brethren recognised that

He was for some years the editor of their official journal, he was appointed President of the great Association which represented that branch of the profession; he was also President of the distinguished College in which they were assembled, and he produced from time to time writings which attracted attention, lectures on mental diseases, mental hygiene, and other works. But he thought in the main some of the most remarkable products of his pen were his annual reports on the work done at Morningside, which were always read with the greatest care, not only by the physicians, but by the public, because there was usually a moral in each report which the public were asked to consider and give effect to. The Chairman had referred to the depressing influence of Dr. Clouston's work, but there was always a cheery optimism about him. He liked to look at the bright side of his patients' cases, and that, no doubt, had an important influence on those who came under his care. (Applause.)

The portraits were then unveiled amid applause. Both are admirable works of art by Mr. Fiddes Watt, representing Dr. Clouston in familiar attitudes, and affording a striking likeness of the subject. The larger picture, a full-length portrait in medical gown and hood, is to be hung in the hall of the asylum, and a three-quarter portrait, showing Dr. Clouston in ordinary morning attire, is a personal gift to the doctor.

The Rev. Dr. Fisher, on behalf of the managers of the asylum, accepted the custody of the larger portrait.

Dr. CLOUSTON, in returning thanks for the gifts, said he was appointed to the Carlisle Asylum as a sort of boy physician at the age of twenty-three, the youngest ever appointed to that position. When he was appointed to Edinburgh at the age of thirty-three his experience was no doubt deficient, but he had fairly high ideals, and he had enthusiasm, and, as the Chairman had indicated, an almost unbounded optimism. An optimist he had lived, and an optimist he hoped to die. He was most anxious, in the interest of the patients, that the institution should be brought up to the highest position attainable, and he had also the ambition, which he thought they would not blame him for, to make the hospital for the insane at Morningside one of the great circle of educational, medical, and philanthropic institutions which the capital of Scotland possessed. (Applause.) They were all aware that mental disease, through a series of unfortunate accidents, as it were, and partly from its very nature, was regarded with quite an undeserved feeling of repugnance and want of interest; and to take away what, in certain respects, one might call the reproach of mental disease was one of his intense ambitions. In his annual reports he did try to secure that, and he believed the reproach was now dying out, and that insanity was coming to be regarded with no other feeling than one of the utmost sympathy. His ideal was to connect his administrative duties with the scientific study of brain and mental disease, and his opportunity of lecturing to nearly three thousand students in the University was a perpetual incitement to himself and his staff. In regard to the scientific work, there was no more difficult subject in human study than the relationship of mind to brain. It was very backward, but they were doing something to lay the foundations of the generalisations of the future. They had done something at Morningside in that way, for there had been published during his time nine volumes and at least two hundred papers in the medical journals. His University connection he looked upon as being at the very core of the kind of work one had to do in keeping up one's enthusiasm and interest in one's work. (Applause.)

On the motion of Mr. GARSON, W.S., a vote of thanks was passed to the Chairman, to Sir William Turner, as chairman of the Committee of Subscribers, and to Mr. R. Scott Moncrieff, W.S., the honorary secretary and treasurer.—*Scotsman*, January 11th, 1910.

#### Dr. JAMES HYSLOP.

WE congratulate Dr. James Hyslop on the honour which he lately received in recognition of his distinguished services to Natal. When Dr. Hyslop was in this country last year his portrait was painted by Mr. Fiddes Watt, and it has now been presented to the Art Gallery of Pietermaritzburg. The presentation was made by Sir Henry Bale, who said that it had been his high privilege to perform many duties of a pleasant nature, but never one which he performed with greater



appreciation than the ceremony which was the occasion of a large attendance of ladies and gentlemen representing every part of the Colony. Continuing, Sir Henry Bale said that Dr. Hyslop had rendered great and valuable services in his own peaceful profession, at the head of the medical service. He was glad to have that opportunity of recognising Dr. Hyslop's work in connection with science and education, and in many other beneficent directions. He recognised his work as honestly and faithfully done, and his success as well-earned. The *Natal Witness* gave the following list of Dr. Hyslop's qualifications and appointments, and we heartily congratulate him on the results of his strenuous labours in Natal in a time of great difficulty, and especially upon the esteem and respect in which he is held after twenty-seven years in the Colony:

Bachelor of Medicine and Master of Surgery, Edinburgh University, 1879; Lieut.-Col. on the Staff and P.M.O., Natal Militia (twenty-eight years' service), Medical Superintendent, Natal Government Asylum since 1882. President, Natal Medical Council since 1896. Chairman, Health Board, from 1904 to 1909, and still a member thereof. Member Natal Pharmacy Board since 1896. President, South African Association for the Advancement of Science, 1906. President, South African Medical Congress, 1905. Delegate to Medical Congresses in South Africa from Natal Branch of British Medical Association, 1906, 1907, and 1908. Delegate to the annual meeting of the British Medical Association, Belfast, Ireland, 1909, from the Natal Branch; and Edinburgh, 1898. Local President, Cancer Research Committee; ex-President of the Natal Branch, British Medical Association, and of the Pietermaritzburg division of the same, and of the Pietermaritzburg Medical Society. One of the Natal representatives on the Council of the University of the Cape of Good Hope. Appointed by Government as the Natal Representative to the Conference of South African States and Colonies on Plague, held at Pretoria, 1899, and Chairman thereof at Durban the same year. Chairman of Inter-Colonial Medical Conference of Delegates appointed by South African Governments, 1904; Government Delegate to Conference on Higher University Education called by the High Commissioner, 1906. Member of various Government commissions of inquiry, etc. Ex-President of various local institutions, such as The Natal Society, Horticultural Society, Botanic Society, etc. Served as P.M.O., Natal Volunteers, South African War, 1899-1901; present in Ladysmith during the siege. Twice mentioned in despatches. P.M.O. of Forces, Natal Native Rebellion, 1906.

#### OBITUARY.

SIR ARTHUR MITCHELL, K.C.B., M.D.

FOURTEEN years ago we recorded the proceedings of a meeting held in Edinburgh on the occasion of Sir Arthur Mitchell's retirement from the General Board of Lunacy. Lord Kinnear said many fine things about this distinguished Scotsman, who made a happy reply. He was not conscious of decrepitude and hoped that there was still some work in him, although his official career had ended. That hope was well fulfilled, and the evening of his days was calm and bright. He died in his eighty-fourth year, on October 12th last. The following article appeared in the *Scotsman*, and we feel that it will be acceptable to our readers in these pages, not only to those for whom he is an historical figure, but also to those who have lost a friend whose place can never be filled.

"Sir Arthur Mitchell was born on January 19th, 1826, and was the son of Mr. George Mitchell, C.E. After receiving his early education at Elgin, he proceeded to Aberdeen University, and afterwards studied in Paris, Berlin, and Vienna. At the passing of the Lunacy Act of 1857 he was appointed one of the Deputy Commissioners, and in 1870 he became a Commissioner. It is beyond doubt that lunacy administration in Scotland has drawn its inspiration from Sir Arthur Mitchell more than from anyone else. Connected with the Board from its institution, he may be truly said to have been the guiding spirit in shaping and developing its policy. Of the system of caring for the insane in private dwellings as it exists at present in Scotland—that feature of Scottish lunacy administration which specially distinguishes it from the lunacy administration of any other country—Sir Arthur

was the creator. His work on *The Insane in Private Dwellings*, written in 1864, did much more than merely sow the seed from which the system of caring for the insane out of asylums has been developed. The views which it enunciated were mature, and they established the system virtually as it exists in Scotland at this day. In this matter, as in every matter connected with lunacy, Sir Arthur's foremost consideration was to promote the well-being of the insane, and to secure for them the greatest possible amount of individual liberty of which their condition admitted; but he never forgot the economic side of the question, and he never considered any scheme for providing for the insane of a locality without keeping prominently in view the interests of the ratepayer.

"As a public servant he spared no pains to inform himself thoroughly as to all the facts and circumstances of whatever subject came before him; and this being done, he possessed in an eminent degree the power of seeing at once where the kernel of the matter lay, and of going straight to its heart. To this faculty must in no small degree be attributed the power and success with which he impressed his views upon district lunacy boards, superintendents of asylums, and parochial boards. Even when these views were not at first welcome, they were at all events seen to be the views of a man who thoroughly knew his subject, and who had looked all round it before coming to a conclusion. But something in addition even to knowledge and reason, backed by a powerful will, enabled him to win over others to his way of thinking. He possessed a profound knowledge of men, and while his views were always expressed and maintained with perfect firmness, they were also expressed with a perfect courtesy and tact that might well have secured the adoption of views in themselves less convincing. It is not wonderful, therefore, that his relations with all officials with whom he came in contact were of the most cordial character, and that his advice and assistance were constantly sought and highly valued, both by public officials of all kinds and degrees and by private persons. His wide sympathies, kindly nature, and ready recognition of merit drew out the highest qualities of those under him, and proved him an official chief of the best type.

"In 1880 Sir Arthur Mitchell was appointed a member of a commission on criminal lunacy (England). He regularly attended the meetings in the Home Office, and he greatly influenced the character of the report and of the Act which followed it. In 1885 he was appointed a member of a departmental committee on criminal lunatics in Ireland, and in 1889 he became chairman of a commission to inquire into the whole lunacy administration of Ireland. From 1867 to 1871 he held the position of Morison Lecturer on Insanity to the Royal College of Physicians, and many of the lectures he then delivered were published. His published papers on lunacy are very numerous, and deal not only with its social and State aspects, but also with its strictly medical aspects. In many directions they have had an important influence on opinion and practice. The book on *The Insane in Private Dwellings* formulated and settled one of the most important features of the lunacy administration of Scotland.

"In addition to the recognition by the State of distinguished merit implied in his appointment to the English and Irish commissions already referred to, Sir Arthur was the recipient of the Orders of Companion of the Bath from Mr. Gladstone in 1886, and of Knight Commander of the Bath from Lord Salisbury in 1887. Among academic and other honours conferred upon him may be mentioned the degree in 1875 of LL.D. from his Alma Mater, the Aberdeen University, of which he graduated as M.A. and M.D.; Hon. Fellow of the Royal College of Physicians of Ireland in 1891; Professor of Ancient History to the Royal Scottish Academy and H.R.S.A. in 1878; hon. secretary of the Meteorological Society; Morison Lecturer on Mental Diseases to the Royal College of Physicians, Edinburgh, 1867-1871; and member of the Universities (Scotland) Commission. While holding an official position, though not physically robust, he was scarcely ever absent from his post through illness. He was a hard worker, and whatever matter he took in hand he went into with all his heart and soul, his great store of nervous energy, upon which he could draw at will for any special exertion, standing him in good stead.

"Sir Arthur Mitchell, from the time he became connected with the Society of Antiquaries of Scotland, almost half a century ago, took a prominent position by his contributions to its *Proceedings*, and afterwards by his services on the Council.

He was the youngest, and he lived to be the last of the little band of eminent men—Joseph Robertson, Cosmo Innes, W. F. Skene, and David Laing on the historic side, and Daniel Wilson, John Stuart, Sir James Simpson, John Alexander Smith, Captain T. W. L. Thomas, and himself on the side of antiquities—whose work and influence did so much to stimulate the progress of the Society and settle its aims and methods on the basis of true science. A keen and careful observer of men and things, endowed with a singular faculty of penetration, and power of expressing his observations and conclusions in terms of the most careful exactitude, he touched no subject which he did not present in new and unexpected aspects and relations. Fortunate in his opportunities of observation, his duties as Deputy-Commissioner in Lunacy taking him frequently to all parts of the country, he had also the methodical habit of taking notes on the spot, so that in the course of years he amassed a body of original materials, from which he was able to draw as occasion occurred. When he met with an object which interested him he secured it if possible; but he was far from being a mere collector of curiosities for their own sakes, being one of those who care less for the object than for the lessons that may be drawn from it. Many of the things he thus collected or took notes of were apparently trivialities to the ordinary observer, but when properly grouped and studied disclosed their relations with other things of more importance and interest, of which they were but the wasted and disguised survivals. In this way he became a pioneer in a new path of inquiry, the investigation of what he called the neo-archaic, that legion of oddments and customs in everyday use which he used so successfully to reflect unexpected light on customs and conditions of life that have long passed away, and whose chief interest lay in the lessons he drew from them as affording useful checks on incautious conclusions relating to the condition and culture of early man.

"In 1861 he was elected a corresponding member of the Society, and in the same year he contributed his first paper to its *Proceedings*. The subject was the congenial one of superstitions he had met with still existing in the Highlands and islands, especially in relation to lunacy. In it he struck the keynote of the theme to which he returned time after time, and which he finally elaborated in *The Past in the Present*. After telling what he had himself seen, and what had been testified to him by living witnesses of these superstitious practices, some of them so cruel and heathenish as to be almost beyond belief, he says—'I am not here detailing what happened in the Middle Ages; it is of the nineteenth century, of what living men saw, that I write.' The record of his official position in the Society is a notable one. In 1867 he was elected a Fellow, and in 1869 a member of the Council. In 1870 he was elected one of the secretaries, his colleague being Dr. John Stuart. This position he held till 1882, when he resigned the secretaryship, and was made a vice-president. Subsequently, after his nomination by the Crown as a member of the Board of Trustees, he was elected as one of their representatives on the Council of the Society, and on the abolition of that Board he was again elected by the Society as one of their vice-presidents.

"When the Rhind Lectureship in Archæology was instituted in 1876 by means of a bequest for that purpose by Mr. A. Henry Rhind, Sir Arthur Mitchell became the first lecturer, delivering the first three courses of six lectures each. These lectures, which were attended by large audiences, were subsequently published in a condensed form in the volume, entitled *The Past in the Present: What is Civilisation?* Both during their delivery and after publication they aroused great interest, not only in scientific circles, but also among the general public. The novelty of the facts collected from personal observation in the northern and western islands and mainland of Scotland, and the originality of the manner in which they were used in their bearing on the conclusions drawn by archæologists from the relics of early man, attracted much attention. Perhaps the most important outcome of the lectures, however, was his answer to the question, 'What is civilisation?' The tendency of archæological writers had been to confuse civilisation with culture, but he showed that while culture was personal to the individual, civilisation only belonged to the aggregate, which included all varieties of culture, from the highest to the lowest. Civilisation he defined to be 'the outcome of the war which man in society wages against the law of natural selection, and the measure of the success in the fight is the measure of the civilisation attained.'"



JAMES RUTHERFORD, M.D., F.R.C.P.Ed., and F.F.P.S.Glas., formerly Physician Superintendent, Crichton Royal Institution, Dumfries.

By the decease of Dr. Rutherford on March 8th, the speciality of psychiatry has lost one of its most distinguished exponents in this country since the passing of the modern Lunacy Acts.

James Rutherford was the eldest son of the Rev. A. C. Rutherford, Falkirk, where he was born on January 18th, 1840. He was educated at St. Andrews and Edinburgh. During his student career, amongst other distinctions, he gained the gold medal of his year in anatomy and the third certificate of honour in Laycock's class of medical psychology and mental diseases. In the spring of 1863, towards the close of his student career, he acted as *locum tenens* at Murray's Royal Asylum, Perth, for Dr. W. C. McIntosh, who shortly afterwards became Medical Superintendent of the Perth District Asylum at Murthly, and has for many years occupied, with distinction, the Chair of Natural History at St. Andrews. Dr. Rutherford graduated as Doctor of Medicine at Edinburgh in 1863. During the ensuing year he went abroad to Berlin and Vienna, studying at the former pathology under Virchow and mental diseases under Westphal, and at Vienna he studied under Hebra and Oppolzer. Returning to Edinburgh in 1864, he was engaged during the ensuing winter as Resident House-physician to Dr. D. R. Haldane at the Edinburgh Royal Infirmary. In the spring of 1865 he started general practice at Bo'ness in Linlithgowshire, not many miles distant from his native place, and in the autumn of the same year he married the future helpmate of his life, Miss Freer, of Melrose, a member of a well-known Border family. During the two or three years of his practice at Bo'ness, Dr. Rutherford contributed several papers to the literature of medical psychology, these taking inspiration chiefly from his observations in Germany and Austria. While at Bo'ness he also translated, along with Dr. C. Lockhart Robertson, a brother of the late Dr. Argyll Robertson, the second edition of Griesinger's classical work on *Mental Disease*, which was published by the New Sydenham Society in 1867, and they thereby laid British alienists under a lasting obligation. Griesinger, the father of modern psychological medicine, published his first edition in 1845, and, as is well known, he profoundly influenced psychiatric thought and literature during the latter half of the nineteenth century. In the same year Dr. Rutherford was elected a Fellow of the Royal College of Physicians of Edinburgh. His translation of Griesinger's great work so effectually aroused his natural interest in, and leanings towards, the study of psychiatry, that he there and then decided to devote his life to the treatment and management of the insane. Accordingly, in 1867, though married, he succeeded in obtaining an appointment as assistant medical officer at Winson Green Asylum, Birmingham, then under the superintendence of Mr. Green. After this step promotion was rapid. In 1870 he succeeded Sir John Sibbald as Medical Superintendent of the Argyll and Bute District Asylum at Lochgilphead. In 1874 he became Medical Superintendent of the large Barony Parochial Asylum (now the Glasgow District Mental Hospital) at Woodilee, Lenzie; and in 1875 he was elected to the Fellowship of the Faculty of Physicians and Surgeons of Glasgow. At Lochgilphead and Woodilee Asylums Dr. Rutherford made his reputation as a leading asylum physician and administrator. His bold and original views on the treatment of the insane, especially in the direction of their outdoor employment and greater liberty, and the development of the open door and parole methods, attracted much attention both at home and abroad. In June, 1883, he was finally promoted to the onerous and responsible post of Physician Superintendent to the Crichton Royal Institution, whose bounds and reputation he greatly advanced during his *regime* of nearly twenty-five years. When he took office the property of the Institution extended to 150 acres, and the patients were accommodated in the First House, the Second House, and the Villa of Maryfield. When he retired the property had extended to upwards of 1300 acres, including the estate of Friar's Carse, the former residence of Dr. and Mrs. Crichton, the founders of the Institution, and the patients were accommodated in fourteen separate houses, many of them stately and imposing buildings which will remain a memorial of him in future times. Amongst the additions and improvements which owed their inception to his unbounded energy, special mention may be made of the introduction of the present copious water supply from the famous artesian well of the Institution; the installation of electric light, which was pronounced by



Dr. Bottomley, the nephew of the late Lord Kelvin, to be one of the finest private installations in the Kingdom; the addition of the handsome dining hall at the First House, the enlargement of the north portion of the Second House; and the erection of Johnston House as a laundry residence; the extensive model farm buildings; the sanatorium for tubercular patients; the various hospitals and villas for both the private and parochial patients; and, lastly, the magnificent Crichton Memorial Church of cathedral proportions, which was commenced in the jubilee year of the Institution and finished in the Diamond Jubilee year of the late Queen Victoria, and was erected as a memorial to the revered founders of the Institution. The Crichton Church is one of the most beautiful modern ecclesiastical structures in Scotland, and it was fitting that the idea of such a memorial should have emanated from the brain of a reverent and religious man, and a son of the manse. Owing to failing health Dr. Rutherford found it necessary to give up the reins of office in October, 1907, and he thus enjoyed his retirement for little more than two years. The end, though not altogether unexpected, came somewhat suddenly, from heart failure, late in the evening of March 8th at his residence at Mountainhall, Dumfries. The interment took place at Dumfries, the coffin being borne by eight of those who had been longest in the Doctor's service at Lochgilphead, Woodilee, and Dumfries from the cemetery gate to the grave, where all that was mortal now reposes in the long sleep close to the scene of his strenuous labours during the latter half of a busy life. A funeral service was held the following day in the Crichton Memorial Church, and was attended by a large congregation of friends and mourners from the Institution and district around.

Dr. Rutherford's work for the insane was well recognised both at home and abroad. With the exception of several original and striking papers in his early graduate days, and his translation of Griesinger's standard work, Dr. Rutherford contributed little to the scientific literature of psychiatry, but he used to the full his remarkable gifts of administration in translating theory into practice. He will be remembered, therefore, not so much for his writings as for what he did to advance the care and treatment of the insane. He did not seek the posts of honour in the Psychological and Neurological Societies of the home country, but few of his contemporaries in this country received as much recognition in the specialty abroad as did Dr. Rutherford, who was elected foreign associate, corresponding, or honorary member of various Medico-Psychological Associations in Belgium, France, Italy, and America. When Dr. Rutherford decided on his life work the modern humane treatment of the insane, which is indissolubly associated with the efforts of Pinel, of the Bicêtre at Paris, and of Tuke, of the Retreat at York, during the close of the eighteenth century, had long been established, and furthered in this country by such workers as Charlesworth, Gardiner Hill, Conolly, Browne, and others, who during the first half of the nineteenth century abolished mechanical restraint from their asylums, and introduced many novel methods of moral treatment which were based on the principle of extending to the treatment of the insane the same privileges, recreations, and occupations as were enjoyed by their more fortunate sane brethren. Much, however, still remained to be done, and Dr. Rutherford was bold and fearless in his methods, regarding the mentally afflicted as capable of more trust and responsibility than had hitherto been accorded them by asylum physicians. He was not only a strong supporter of the non-restraint system; he went further than this, and warmly advocated the cause of greater liberty for the insane, and this took shape in his practice in the adoption of the open-door system, the liberal prescription of healthy outdoor employment and exercise, and the generous use of parole both within and beyond the grounds of the institution. No man had a kinder heart for the insane than Dr. Rutherford, and there can be no doubt that the wide adoption of his methods in this country and abroad has promoted the recovery and conduced towards the greater contentment and happiness of numberless afflicted ones. His Majesty's Commissioner in Lunacy, writing at the time of Dr. Rutherford's retirement, said of him: "The loss to the Institution and to the cause of progressive lunacy administration in Scotland, which Dr. Rutherford's resignation entails, can only be truly estimated by those who have watched his career, and who are interested in the difficult problem in the care of the insane. Dr. Rutherford was a bold and original administrator, who never hesitated from motives of timidity or self-interest to introduce new and original methods of care and treatment which he considered to be of advantage to the insane as a class."

"At a time when the general provision for the housing of the insane in the asylums of Scotland was not so liberal as it now is, he was one of those who, by his example and action, promoted a movement which resulted ultimately in a complete structural renovation of almost all the institutions in the country. This movement was, no doubt, often open to the charge of extravagance, but its general influence for good was unmistakable. In addition, he promoted the industrial employment of the insane, the open-door system in asylums, and liberty on parole to individual patients."

Dr. Rutherford was a man of tall and commanding physique, energetic and sanguine, and of great amiability and personal popularity. His kindly heart and genial sympathy endeared him personally to his directors, staff, and patients, and to his many friends both in and outside of the profession. He was for many years a Justice of the Peace for the county of Dumfries, and he leaves a widow and family of four sons and four daughters. Three of the former are in the medical profession, and two of the latter are married to doctors in the speciality.

C. C. E.

#### PROFESSOR LOMBROSO.

On announcing the death of Professor Cesare Lombroso on October 19th, the *Times* published the following memoir:

"Cesare Lombroso was born at Verona on November 18th, 1835. He was descended from a line of Jews, many of whom had attained to eminence as authors, rabbis, lawyers, and physicians. Among his progenitors on his mother's side was David Levi, the poet, who took part in the struggle for Italian liberty. As a boy Lombroso gave signs of extreme precocity. The monuments of antiquity which he saw around him impelled him to study Roman history with avidity, and he devoured Livy, Sallust, and Tacitus ere he had hardly left the nursery. When he was twelve years old he wrote, and actually obtained publication for, an essay on *The Greatness and Decline of Rome*. A year later his attention was attracted by an obscure work on *The Elucidation of Historic Monuments by Philological Analysis*, written by Paolo Marzolo, of Treviso, a thinker who deserved to be better known, and who in this incomplete work anticipated many later discoveries. Lombroso wrote an enthusiastic review of the book in a Verona newspaper. Marzolo sent him a letter of thanks and expressed a desire to make his acquaintance. He was astounded when the youthful reviewer presented himself. An acquaintance which lasted many years ensued. Lombroso abandoned the ordinary high-school course and applied himself, under Marzolo's supervision, to the study of Oriental philology. He learnt Hebrew, Chaldee, Egyptian, and Chinese, and endeavoured to discover a common basis for all these tongues. Marzolo recognised however, that owing to the troubled state of the times no living could be earned at philology, and on his advice Lombroso turned his attention to medicine.

"*Early career.*—He graduated at Padua, and went for some time to Paris and Vienna to continue his studies. At the very outset of his medical work he was attracted by nervous and mental diseases, and while still a student he published two treatises—one on *Insanity in Antiquity* and the other on *The Insanity of Cardan* (the sixteenth century mathematician). In the latter essay he first advanced the theory of the relation between genius and crime, which was to form the chief purport of his later work. When the Austro-Italian war broke out in 1859 Lombroso enlisted as a surgeon and remained in the army for six years. His experiences at the front he embodied in a treatise on amputations, which gained for him the Riberi prize, the only academic distinction of the kind he was ever awarded. His regiment was ordered to Calabria, and his attention was attracted by the diversity of type exhibited by the soldiery, who were drawn from all parts of Italy. He conducted a series of studies which he endeavoured to make the basis of an anthropological chart of Italy. He measured and examined no less than 4000 individuals, and gained an invaluable experience, which stood him in good stead in his subsequent criminological investigations.

"The removal of his regiment to Pavia, a University town, gave Lombroso an opportunity of continuing his study of nervous diseases at the district asylum, but his military superiors did not look with favour on these scientific labours; difficulties

were placed in his way, and Lombroso finally determined to leave the army. He established himself as a private lecturer on nervous diseases at the University, and took charge, in an honorary capacity, of a department at the asylum. After a year's struggle Lombroso was unexpectedly appointed Professor of Psychiatry at the University of Pavia at a small salary. He prepared a short inaugural address, entitled "Genius and Insanity," in which all the main ideas of his *magnum opus* were outlined. The lecture at once marked him out as a scientist and thinker of great originality.

"*A notable discovery.*—In 1872 Lombroso incurred a great deal of odium for a discovery which proved to be of considerable scientific and economic importance. He noted the fact that a large number of the inmates of the asylum were suffering from "pellagra," a curious disease, which first affected the skin and afterwards attacked the brain and nervous system. Lombroso discovered that the disorder was to be traced to a poison contained in diseased maize, which the Lombardian landowners were in the habit of doling out to the poor peasantry. At a time when toxins were unknown, Lombroso succeeded in extracting the poison from the maize and infecting animals with it—quite in the manner of modern bacteriologists. His discovery was received with a howl of derision and objugation; the landowners were especially indignant, as Lombroso called upon the Government to forbid the distribution of the dangerous cereal. At a meeting of the Lombardo-Venetian Institute one of his colleagues called him a dreamer and declared that his experiments were pure imagination. Lombroso demanded a scientific commission, to whom he demonstrated his experiments on lower animals. The members were still unconvinced, and this time accused Lombroso of mixing strychnine with the juice extracted from the maize, and they even demanded his dismissal from the University. A friend of Lombroso, M. Alfred Maury, reported the facts to Berthelot, the Parisian chemist, who analysed the poison and established the fact that the maize contained an injurious substance resembling strychnine, but differing from it in important particulars. The validity of Lombroso's discovery was thus triumphantly established. He was not satisfied with this initial success, but for several years fought on the platform and in the press for an improvement in the economic conditions of the peasantry whereby the ravages of the disease might be combated. He met with most virulent opposition, which made the tenure of his post extremely uncomfortable, and he welcomed the offer of the Chair of Psychiatry at Turin, the home of his wife's family.

"*Genius and crime.*—At Turin Lombroso continued his criminological studies. He established an extensive museum of crime, the contents of which served as the raw materials for his work. He was the first to apply the anthropometric method to the study of criminology, and his collection of skulls was unique. His examination of the skull of a notorious murderer named Vilella led to his anatomical theory of crime, which he regarded as an atavistic reversion to a primitive type, the nervous and structural characteristics observed in criminals being also present in early members of the human race and certain monkeys. Lombroso showed that the overwhelming majority of criminals suffered from some form or other of nervous disease. These views he embodied in his great work entitled *L'Uomo Delinquente*, published in 1889. Lombroso had a somewhat similar theory for the existence of genius, which he declared was a form of larvate epilepsy; this somewhat fantastic thesis was presented in his *L'Uomo di Genio*, which has been translated into several languages. Lombroso, perhaps, over-rated the physical causes of crime and laid too little stress on economic conditions. But his pioneer labours, in which he was ably seconded by a devoted band of pupils, led to the creation of the modern science of criminology, of which the deceased treated in almost every phase. He had a curious explanation of the recurrent waves of reaction and political crime which have stained the annals of history. There are mental epidemics as well as physical, he declared, and he attributed the frequent outbreaks of anti-Semitism, by which his own race was afflicted, to this cause. Towards the close of his life he devoted himself to an examination of spiritualist phenomena, his view being that these were rather the result of abnormal mental conditions than of hidden external causes. The principal works of the deceased have been mentioned above. He was the associate editor of the *Archivio di Psichiatria*. Among his disciples may be mentioned his two sons-in-law, Professor G. Ferrero and Signor Carrara, Enrico Ferri, Baron Garofalo Roncoroni, Patrizi, and



Zerboglio. His daughters are well known in the literary world, and on the occasion of the thirtieth anniversary of his appointment at Turin published a biography of the deceased together with an account of his principal works."

#### BERLIN INTERNATIONAL CONGRESS.

THE Fourth International Congress on the Care of the Insane will be held in Berlin from October 3rd to 7th next. The Congress will be concerned not exclusively with current problems as to cure and treatment of the insane, but also with all matters relating to the preservation of mental health. It will therefore consider injuries to mental health resulting from social evils and hygienic defects, the production of mental disorder in earliest childhood and its prevention, the prophylaxis of psychical abnormalities, treatment inside and outside of asylums, family care, employment, support of the insane and their families, and after-care.

An exhibition will be held in connection with the Congress showing completely the progress in the care of the insane in Germany in the last three decades, with a survey of what has been done in other civilised countries.

A committee of the German Verein für Psychiatrie, in conjunction with the permanent committee for organising these congresses, of which Sir G. O'Farrell and Dr. John Macpherson are the British representatives, have organised discussions on the following subjects: The relation between civilisation and mental disease, the increase of insanity, the importance of organised care of infants and children for the prevention of epilepsy, idiocy, and psychopathies, bacillus-carriers in asylums, voluntary boarders, polyclinic treatment of the psychoses, insanity in relation to naval and military service, psycho-pathology in modern art and literature, social re-instatement of the insane by graduated work.

Notice of papers to be read should be sent as soon as possible to Prof. Dr. Boedeker, Fichtenhof, Schlachtensee, Berlin. General information may be obtained from Dr. Falkenburg, 79 Herzbergstrasse, Lichtenberg, Berlin.

Questions relating to the Exhibition should be addressed to Prof. Dr. Alt, Uchtsprunge, Altmark, Germany.

Particulars as to subscription to membership are not yet issued.

#### AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE Programme of the Sixty-sixth Annual Meeting of the American Medico-Psychological Association for May 3rd to 6th is to be held at Washington, D.C., under the Presidency of Dr. Drewry. It gives evidence of great activity in the Association, and we heartily congratulate the members on the scheme of work submitted.

Address of Welcome, by Dr. George M. Kober, Washington, D.C., and others.  
Reports from Committees.

Memorial notices: Dr. E. H. VanDeusen, by Dr. Justin E. Emerson, Detroit, Mich. Dr. B. D. Eastman, by Dr. T. C. Biddle, Topeka, Kansas. Dr. William C. Krauss, by Dr. Arthur W. Hurd, Buffalo, N.Y. Dr. W. A. Gordon, by Dr. M. T. White, Milwaukee, Wis. Dr. M. J. Stack, by Dr. I. W. Blackburn, Washington, D.C.

Presidential Address, by Dr. Wm. M. F. Drewry, Petersburg, Va.

General Congress, "Artificial Immunisation." Dr. Ludwig Hektoen, "The Formation of Anti-bodies." Dr. Frederick P. Gay, "The Relation of Anaphylaxis to Immunisation." Dr. S. P. Beebe, "Immunisation in Non-Bacterial Diseases." Dr. Walter R. Brinkerhoff, "Immunisation in Leprosy."

Congress: Address of the President, Dr. Edward L. Trudeau, Saranac Lake, N.Y.

"Review of the Histopathology of Dementia Præcox," By Dr. E. E. Southard, Harvard University. "A Discussion of the Mental Make-up in the Dementia Præcox Group," by Dr. August Hoch, Director, Psychiatric Institute, Ward's Island, N.Y.C. "Intermittent Forms of Dementia Præcox," by Dr. William Rush Dunton, jun., Towson, Md. "Ethical Aspects of Medical Expert Testimony in Relation to the Plea of Insanity as a Defence to an Indictment for Murder,"



by Dr. Carlos F. MacDonald, New York. "Studies in Cerebral Arteriosclerosis," by Dr. Charles I. Lambert, New York.

"Immunity in Relation to Psychiatry," by Dr. John G. FitzGerald, Toronto, Ontario. "On a History of the American Medico-Psychological Association," by Dr. Henry M. Hurd, Baltimore, Md. "Possible Preventive Measures in Insanity," by Dr. Albert Warren Ferris, President, State Commission in Lunacy, Albany, N.Y. "Types of Sleep in the Insane," by Dr. Albert M. Barrett, Ann Arbor, Michigan. "Mild Manic States or the Cyclothemias," by Dr. Smith Ely Jelliffe, New York. "Notes on Non-Syphilitic Forms of Meningitis," by Glanville Y. Rusk, New York.

"Organisation and Conduct of the Acute Service in State Hospitals," by Dr. Frank P. Norbury, Kankakee, Ill. Discussion by Dr. George H. Kirby, Ward's Island, N.Y., Dr. Harry W. Miller, Washington, D.C. "Alcoholic Amnesia," by Dr. C. W. Pilgrim, Poughkeepsie, N.Y. "Cardio-genetic psychosis—Report of a Case with Autopsy," by Dr. Henry A. Cotton, Medical Director, New Jersey State Hospital at Trenton, N.J.; Dr. D. S. Hammond, Pathologist, New Jersey State Hospital at Trenton, N.J. "Insanity among Adolescent Criminals," by Dr. Charles H. North, Dannemora, N.Y. Paper by Dr. B. D. Evans, Morris Plains, N.J. "Certain Disturbances of Thought," by Dr. J. M. Keniston, Middletown, Conn. "Syphilitic Disorders of the Brain," by Dr. C. B. Dunlap, Psychiatric Institute, Ward's Island, New York.

Meeting held at the Government Hospital for the Insane at the Invitation of Dr. William A. White, Superintendent: (1) "Control of Epidemic Diseases in Hospitals for the Insane," two or three papers from Laboratories in Massachusetts; or (2) "What Our Summer and Winter Colonies are doing for the Restoration and Improvement of Patients," five-minute addresses, by Dr. E. H. Howard, Rochester, N.Y., Dr. A. W. Hurd, Buffalo, N.Y., Dr. C. G. Wagner, Binghamton, N.Y. "Military Psychiatry," by Captain Robert L. Richards, Medical Corps, United States Army, Washington, D.C.

Annual Address: "Some Suggestions on the Psychology of Superstition," by Dr. J. B. Dresslar, Professor of Psychology, University of Alabama. "Pellagra," with lantern-slide demonstrations, by Dr. C. H. Lavinder, P. A. Surgeon, Public Health, and Marine Hospital Service, Washington, D.C.

"Mental Symptoms of Pellagra," by Dr. Eugene D. Bondurant, Mobile, Ala. "Possibility of Improving Demented Patients by Instruction," by Dr. R. H. Hutchings, Ogdensburg, N.Y. "Problems of Immigration," by Dr. Sydney D. Wilgus, President Board of Alienists, New York City, N.Y. "Juvenile Paresis—Clinical and Anatomical Report of a Case," by Dr. Henry W. Miller, Clinical Director, Government Hospital, Washington, D.C. Paper by Dr. Nicholas Achucarro, Histo-pathologist, Government Hospital, Washington, D.C. "Lesions of Spinal Cord in Old Age," by Dr. Arthur S. Hamilton, Minneapolis, Minn. Paper by Dr. William W. Richardson, Norristown, Pa.

#### THE LIBRARY OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE Library is open daily for reading, and for the purpose of borrowing books. Books may also be borrowed by post, provided that at the time of application threepence in stamps is forwarded to defray the cost of postage. Arrangements have been made with Messrs. Lewis to enable the Association to obtain books from the lending library belonging to that firm, should any desired book not be in the Association's Library.

The following books have recently been added to the Library:

Kraepelin.—*Psychiatrie*, eighth edition.

Lewandowski.—*Funktionen des zentralen Nervensystems*.

Morton-Prince.—*The Dissociation of a Personality*.

Janet.—*The Major Symptoms of Hysteria; Automatisme Psychologique; Névroses et Idées Fixes; Les Obsessions et la Psychasthénie; Les Névroses*.

Edinger.—*Vorlesungen ü. d. Bau der nervösen Zentralorgane der Menschen und der Tiere*.

Cornil and Ranvier.—*Manuel d'Histologie Pathologique*.

Flatau, Jacobsohn, and Minor.—*Handbuch d. pathologischen Anatomie des Nervensystems*.

White.—*Outlines of Psychiatry.*

Gierlich and Friedmann.—*Studies in Paranoia.*

Jung.—*The Psychology of Dementia Præcox.*

Freud.—*Selected Papers on Hysteria and other Psycho-neuroses; Die Traumdeutung.*

Myers.—*Text-Book of Experimental Psychology.*

McDougall.—*Social Psychology.*

Drs. Orr and Rows have kindly presented to the Library a copy of *Modern Problems in Psychiatry*, by E. Lugaro (translated by Orr and Rows).

Applications for books should be addressed to The Resident Librarian, Medico-Psychological Association, 11, Chandos Street, W. Other communications should be addressed to the undersigned at Long Grove, Epsom.

H. DEVINE, } *Hon. Secretaries,*  
B. HART, } *Library Committee.*

#### NOTICES BY THE REGISTRAR.

THE next examination for the Certificate in Nursing will be held on May 3rd, 1910.

Essays for the Bronze Medal must reach the Registrar before June 15th, 1910.

The next examination for the Certificate in Psychological Medicine will be held on July 6th, 1910, and that for the Gaskell Prize on July 21st, 1910.

All information may be obtained from the Registrar, Dr. A. Miller, Hatton Asylum, near Warwick.

#### NOTICES OF MEETINGS.

*Quarterly Meeting.*—The next Quarterly Meeting will be held in London on Tuesday, May 24th, 1910.

*South-Eastern Division.*—The Spring Meeting will be held, by the courtesy of Dr. Percy J. Bailey, at the London County Asylum, Hanwell, on Tuesday, April 26th, 1910.

*South-Western Division.*—The Spring Meeting will be held, by the courtesy of Dr. Norman Lavers, at Bailbrook House, Bath, on Friday, April 29th, 1910.

*Northern and Midland Division.*—The Spring Meeting will be held, by the courtesy of Dr. C. T. Street, at Haydock Lodge, Newton-le-Willows, on Tuesday, April 19th, 1910.

*Irish Division.*—The Spring Meeting will be held on Thursday, April 21st, 1910.

#### APPOINTMENTS.

Ellis, W. Gilmore, M.D., M.R.C.S., Medical Superintendent, Government Lunatic Asylum, Singapore, has been appointed Principal Civil Medical Officer, Straits Settlements, *vice* Dr. D. K. McDowell, C.M.G.

Bell, J. H., M.D., Third Medical Officer of County Lunatic Asylum, Hatton, near Warwick.



# THE JOURNAL OF MENTAL SCIENCE

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## *The International Committee for the Study of the Causes and Prophylaxis of Mental Disease.*

(Communicated by Dr. R. PERCY SMITH.)

IN view of the impending meetings of the Fourth International Congress on the Care of the Insane, to be held in Berlin from October 3rd to 7th, 1910, it seems desirable that the members of the Medico-Psychological Association and other readers of the *Journal of Mental Science* should be able to have in print a record to the present date of the proceedings of the International Committee, which was originally appointed at the Congress held at Milan in 1906 with the object of studying the causes and prophylaxis of mental disease.

It would seem most convenient to achieve this by publishing the report on the meetings of the Committee which was made to the Home Secretary and the Scottish Office by the two official delegates appointed by the Government to attend the meetings held in Vienna in 1908. The late Home Secretary (then the Rt. Hon. Herbert Gladstone), having given permission for publication, the Report is reproduced here together with the "Statute" or regulations for the working of the Committee.

Hitherto, as far as is known, no definite promise has been made by any of the Governments who were officially represented as to the contribution of an annual subsidy, the matter resting at present in the hands of the Italian Government to approach other Governments with this object. For this reason



also the British Committee has not been able to do more than record the proceedings of the International Committee, and until the various Governments see their way to make some subsidy it would seem to be useless to make any appeal for subscriptions from other bodies or from individuals.

*Copy of Report by the Delegates from the United Kingdom to the International Congress on the Care of the Mentally Deranged and to the International Committee for the Study of the Causes of Mental Disease, held at Vienna on the 6th to 9th October, 1908.*

IN accordance with instructions given to us, as contained in letters of 12th, 14th, 18th and 22nd August, 28th September and 3rd October last from the Home Office and the Scottish Office, we have the honour to report as follows :—

(1) We attended the sittings of the International Committee for the Study of the Causes of Mental Disease held at Vienna on the 6th and 9th October, 1908, and the various meetings of the International Congress on the Care of the Mentally Deranged and the Treatment of the Insane which met in Vienna on the 7th October, and which held meetings each day until the 11th October. We visited several institutions for the care and treatment of the insane, including the psychiatric clinique of the General Hospital, Vienna, the new asylum for the insane at Vienna, and the psychiatric clinique of the University of Munich presided over by Professor Kraepelin.

## I. THE INTERNATIONAL COMMITTEE.

### (a) *History of its Formation and Development.*

At the Second International Congress for the Care of the Insane held at Milan in September, 1906, Dr. Ludwig Frank, of Zürich, made a formal appeal in favour of his proposal to found an International Institute for the Study of the Causes of Mental Affections and their Prophylaxis. The proposal was warmly supported by many distinguished psychiatrists of various countries, and, when put to a fully attended meeting, was carried almost unanimously. The Presidential Committee of the Congress was then empowered to nominate an Inter-

national Committee, having for its object the co-ordination of the work of all the various countries interested. At the closing meeting of the Congress the following members' names were proposed and accepted :

*Argentina*.—Prof. Cabred Domingo, Buenos Ayres ; Prof. Ingenieros, Buenos Ayres.

*Austria*.—Herr Fedor Gerenyi, State Inspector, Vienna ; Prof. Arnold Pick, University of Prague.

*Belgium*.—Dr. Al. Peeters, Medical Superintendent of the Colony of Gheel ; Dr. Morel, Medical Superintendent of the State Asylum, Mons.

*Brazil*.—Prof. Juliano Moreira, Medical Superintendent, The Asylum, Rio de Janeiro.

*Britain*.—Prof. Percy Smith, 36, Queen Anne Street, London, W. ; Dr. J. H. MacDonald, Govan District Asylum, Hawkhead, Paisley.

*Denmark*.—Prof. Friedenreich, Psychiatric Clinique, Copenhagen.

*France*.—Prof. Jules Voisin, Salpêtrière, Paris ; Dr. Auguste Marie, Villejuif Asylum, Seine.

*Germany*.—Prof. Brunholfer, Psychiatric Clinique, Breslau ; Prof. Konrad Alt, Uchtspringe, Saxony.

*Greece*.—Prof. M. Catsaras, Psychiatric Clinique, Athens ; Prof. Tsirigotis, University of Athens.

*Holland*.—Prof. Dr. Van Deventer, State Inspector, Amsterdam ; Dr. Deknatel, Breda.

*Hungary*.—Dr. G. de Raisz, Minister of the Interior, Budapest ; Dr. Von Olah, Medical Superintendent of Anglalfold Asylum, Budapest.

*Italy*.—Prof. Leonardo Bianchi, Psychiatric Clinique, Naples ; Prof. G. C. Ferrari, Bologna ; Prof. Augusto Tamburini, Psychiatric Clinique, Rome.

*Japan*.—Dr. Prof. Sakaki, University of Fukuoka.

*Luxemburg*.—Dr. L. Buffet, Medical Superintendent, Ettelbrück.

*Norway*.—Dr. Hans Evensen, Medical Superintendent, Asylum, Trondjhem ; Prof. Ragnar Vogt, University of Christiania.

*Portugal*.—Prof. Maghalaes, Lemos, Lisbon.

*Roumania*.—Prof. Soutra, Psychiatric Clinique, Bucharest.

*Russia*.—Prof. Van Bechterew, Military Asylum, St. Petersburg ; Prof. Bajenow, Krasuoselskara, 3, Moscow.

*Spain*.—Dr. Rodriguez Morini, Barcelona; Dr. Giné y Marriera, Medical Superintendent, Nueva Belen, Barcelona.

*Sweden*.—Prof. Th. Nerander, Psychiatric Clinique, Lund; Dr. Prof. Kimberg, 23, Pridderagaten, Stockholm.

*Switzerland*.—Prof. Auguste Forel, Geneva; Dr. Ludwig Frank, Zürich; Prof. Eugen Bleuler, Psychiatric Clinique Zürich.

*United States of America*.—Prof. Adolf Meyer, Pathological Institute, New York.

The members of the International Committee were requested to form in their respective countries "national committees" composed of "persons agreeing to work for the conquest of such a noble end, and in putting at the disposition of the Committee all their personal influence and energy."

In May, 1907, Dr. R. Percy Smith brought the matter before a meeting of the Medico-Psychological Association held in London, and the following gentlemen were subsequently nominated as members of the British National Committee:

Dr. Joseph Loughheed Baskin, Medical Superintendent, Fisherton House, Salisbury; Dr. C. Hubert Bond, Medical Superintendent, London County Asylum, Long Grove, Epsom; Dr. F. StJohn Bullen, 12, Pembroke Road, Clifton, Bristol; Dr. William Richard Dawson, Medical Superintendent, Farnham House, Finglas, Dublin; Dr. Charles C. Easterbrook, Medical Superintendent, Crichton Royal Institution, Dumfries; Dr. Edwin Goodall, Medical Superintendent, City Asylum, Cardiff; Dr. Theo. B. Hyslop, Resident Physician, Bethlem Royal Hospital, London, S.E.; Dr. W. W. Ireland, Musselburgh, Scotland; Dr. Robert Jones, Medical Superintendent, London County Asylum, Claybury, Essex; Dr. Richard John Legge, Medical Superintendent, Derby County Asylum, Mickleover; Dr. Hamilton Clelland Marr, Medical Superintendent, District Asylum, Lenzie, Glasgow; Dr. Charles Mercier, 34, Wimpole Street, London, W.; Dr. Frederick Walker Mott, Director of the Pathological Laboratory, London County Asylum, Claybury, Essex; Dr. Michael Nolan, Medical Superintendent, District Asylum, Downpatrick, Ireland; Dr. Conolly Norman, Medical Superintendent, Richmond Asylum, Dublin (since dead); Dr. William Rawes, Medical Superintendent, St. Luke's Hospital, London, E.C.; Dr. William Ford Robertson, Pathologist to the Scottish Asylums, 10, Morningside Terrace,

Edinburgh ; Dr. Geo. M. Robertson, Medical Superintendent, Royal Edinburgh Asylums, Morningside, Edinburgh ; Dr. Richard Gundry Rows, Pathologist, County Asylum, Lancaster ; Dr. Alex. Reid Urquhart, Physician Superintendent, Murray's Royal Asylum, Perth.

In addition to the above, Dr. R. Percy Smith, 36, Queen Anne Street, London, and Dr. J. H. Macdonald, Hawkhead Asylum, Paisley, were nominated as being already on the International Committee. Dr. John Macpherson has also been nominated as an *ex officio* member of the British Committee since the meeting of the Congress in Vienna.

The first meeting of the International Committee for the Study of the Causes and Prevention of Insanity was held in the University of Amsterdam on 4th September, 1907, at 11 a.m.

There were present : Profs. Alt and Aschaffenberg, Germany ; Prof. Bajenoff, Russia ; Dr. L. Buffet, Luxembourg ; Prof. Catsaras, Greece ; Professor Van Deventer and Dr. Deknatel, Holland ; Prof. Ferrari, Italy ; Dr. Frank, Switzerland ; Dr. Giné y Marriera, Spain ; Dr. J. H. MacDonald, Great Britain ; Dr. Marie, France ; Dr. Morel, Belgium ; Dr. White, United States ; Prof. Moreira, Brazil.

In the absence of Prof. Tamburini, the President, Prof. Van Deventer, was called to the chair.

The following motions were agreed to :

(1) That the Board of Directors consist of five members and two general secretaries.

(2) That besides Dr. Tamburini, the President, and Drs. Ferrari and Frank, the two general Secretaries, all of whom were elected in Milan, Drs. Van Deventer, Marie, Alt, and Pick, shall be members of the Board of Directors.

The following printed Articles, introduced by Drs. Van Deventer and Deknatel, were adopted :

*Art. I.*—That the Directorate of the Committee be requested to collect all documents relating to the prevention of mental disease and the degeneration of the human race, with the view of instructing Governments and peoples as to the general appropriate measures to be taken for their prevention.

*Art. II.*—That the Directorate be empowered to complete the Committee by adding new collaborators as members.

*Art. III.*—That the different Governments be invited to



appoint representatives to the Committee, each Government to appoint one or more delegates.

*Art. IV.*—That the Committee shall, as a rule, meet once a year.

*Art. V.*—That the Board of Directors be elected every three years.

*Art. VI.*—That during its sittings the Committee shall introduce new questions for discussion or adoption.

The second session took place the following day, at same hour and place.

*Present.*—Drs. Alt, Bajanoﬀ, Buffet, Catsaras, Deknatel, Van Deventer, Frank, Ferrari, Giné y Marriera, MacDonald, Maris, Morel, Peeters, White. Professor Alt was called to the Chair.

Arts. VI, VII, and VIII, drawn up by Drs. Van Deventer and Deknatel, were introduced, and after discussion it was resolved :

*Art. VI.*—That the Committee publish in its bulletins :

(a) The laws and regulations adopted by different Governments relative to the care and treatment of the insane, abnormal persons, drunkards, etc.; as well as all measures adopted by the Governments and tending towards the suppression of nervous or mental affections.

(b) The projects of the laws on these matters and the reports preceding them.

(c) The reports on questions discussed or placed on the programme of the International Congress for the Care of the Insane.

(d) Original articles and notes on questions falling within the sphere of the Committee and of general interest.

(e) The reports from delegates upon the actual state of the legislation, and the particular measures adopted in each country to combat the propagation of nervous and mental affections.

*Art. VII.*—That the Committee prepare the organisation of international statistics of the insane.

*Art. VIII.*—That the Committee enter into relationship with scientific and humanitarian societies whose aims enter into the sphere of its mission and also communicate with persons who, by reason of special knowledge, can render it some service. Each member of the Commission shall impart to his Government, to societies, and persons mentioned above, the themes discussed at the meetings of the Congress, and shall invite them to take part in the preparation of the work.

*Art. IX.*—That in order to meet the necessary expenses, Governments, scientific and humanitarian societies, wealthy individuals, and the Press, be appealed to.

The consideration of Art. X was postponed for future consideration. Art. X read as follows :

“The bulletin of the Committee shall be sold to the public at the lowest price possible. If the budget permit, the Committee shall select some published works and place a certain number at the disposition of the different Governments, for distribution to public libraries, reading rooms, college libraries, etc.”

It was announced that His Majesty the King of Italy had agreed to become the Patron of the proposed International Institute, and that the Italian Government had declared its willingness to recommend the International Institute to all Governments of civilised states for their support.

A telegraphic message was sent to His Majesty King Victor Emmanuel, conveying the thanks and gratitude of the members of the International Committee for his gracious favour.

It was unanimously resolved that the seat of the Board shall be at Zürich. The seat of the Institute to be created was not decided.

Dr. Frank was requested to attend to the legal formalities at Zürich, and to find a public bank in that city to take care of the financial affairs of the Institute.

It was decided that auditors be chosen annually by the Committee. Drs. Morel and Bajanoff were elected auditors for the current year.

Dr. Frank was requested to procure the necessary assistance for the business transactions and to find a legal expert who may be called upon for advice when the affairs of the Institute should require it.

The Board of Directors was requested to greet the Special Committee of the German Psychiatric Societies for the investigation of certain forms of mental diseases, and ask them for their collaboration.

Secretaries Ferrari and Frank were requested to communicate with Count Lombard, Lugano, who had offered his chateau for the meetings of the Committee when the Institute was first proposed, and to beg him to deposit to the credit of the Institute from 10,000 to 20,000 francs in the bank decided upon.

It was decided that the publications of the Committee should be printed in English, French, German, Italian.

It was resolved that the next session of the Committee should take place in Vienna on the 6th October, 1908, the day before the opening of the third International Congress for the Care and Treatment of the Insane.

(b) *Constitution of the Committee.*

The following is a list of the twenty-seven official delegates accredited by their respective Governments to the International Committee, which met at Vienna on the 6th of October, 1908 :—

*Great Britain.*—Dr. Percy Smith, London ; Dr. John Macpherson, Edinburgh.

*Austria.*—Prof. Wagner Von Jauregg, Vienna.

*Belgium.*—Dr. Peeters, Gheel.

*Brazil.*—Prof. Moreira, Rio Janeiro.

*Bulgaria.*—Dr. Donadschieff, Sofia.

*Chili.*—Dr. Joaquin Castro, Santiago.

*Denmark.*—Prof. Friedenreich, Copenhagen ; Dr. Hallager, Copenhagen.

*America.*—Prof. Meyer, New York.

*France.*—Prof. Voisin, Paris ; Prof. Marie, Paris ; Dr. Dubief, Paris.

*Greece.*—Prof. Catsaras, Athens ; Prof. Tzirigotis, Athens.

*Holland.*—Dr. Schnurmans, Utrecht.

*Hungary.*—Dr. de Raisz, Budapest ; Dr. Olah, Budapest.

*Italy.*—Prof. Santoliquido, Rome.

*Luxembourg.*—Dr. Buffet, Ettelbrück.

*Mexico.*—Prof. Erdozain Dr. Peon del Vale.

*Portugal.*—Prof. Bombarda, Lisbon.

*Russia.*—Prof. Bechterew, St. Petersburg.

*Sweden.*—Prof. Nerander, Lund.

*Switzerland.*—Prof. Bleuler, Zürich, and Dr. Frank, Zürich.

The following is a list of the nineteen unofficial members of the Committee elected at the Milan Congress in 1906 :

*Germany.*—Prof. Bonhoffer, Professor Alt.

*Great Britain.*—Dr. J. H. MacDonald.

*Argentine Republic.*—Prof. Cabred Domingo, Prof. Ingegnieros.

*Belgium.*—Dr. Morel.

*Brazil.*—Prof. Peixoto.

*Spain.*—Prof. Rodriguez Morini, Dr. Giné y Marriera.

*Holland.*—Prof. Van Deventer, Dr. Deknatel.

*Italy.*—Prof. Tamburini, Prof. Bianchi.

*Japan.*—Prof. Yasaburo Sakaki.

*Norway.*—Prof. Vogt, Dr. Evensen.

*Roumania.*—Prof. Soutra.

*Russia.*—Dr. Bajenoff.

*Sweden.*—Dr. Kimberg.

It will be seen from the above lists that nineteen nations sent official delegates, the only European nations unofficially represented being Germany, Norway, Spain, and Roumania. On the other hand, these four nations were unofficially represented by three, two, two, and one elected delegates respectively. No less than fourteen of the official members had previously been elected members of the Committee, *e.g.*, one of the present reporters (Dr. Percy Smith).

As the Constitution of the Committee at present stands, the official delegates are in a majority (27 to 19).

(c) *The Work of the Committee.*

At the Milan Congress of 1906, as will be seen from the preceding pages, the only business done was the election of members.

At the Amsterdam Congress of 1907 a beginning was made with the organisation of the Committee, the appointment of officials, and of an Executive Committee, of which Prof. Tamburini, of Milan, was appointed President; Drs. Frank (Zürich), and Ferrari (Bologna), Secretaries; and Drs. Van Deventer (Holland), Marie (France), Alt (Germany), and Pick (Austria Hungary), Members of Council. It will be observed that this Executive Board was appointed prior to the appointment of official delegates to the Committee, and that it holds office for four years, *i.e.*, until 1911. It therefore happens that only two official delegates (Dr. Marie and Dr. Frank) are members of the Executive Committee.

(d) *The Vienna Meetings of the Committee.*

The Committee met in the University Buildings at Vienna on the afternoon of Tuesday, October 6th, 1908, under the



presidency of Prof. Tamburini. The British delegates found themselves at a disadvantage in so far as a number of printed papers, which they had not previously seen, embodying resolutions to form the basis of discussion, were placed in their hands for the first time.

The meeting, which lasted for three hours, was wholly occupied by a consideration of these proposals, which had for their purpose a determination of the lines of policy and operation which the Committee ought to adopt with the view of attaining its objects—an inquiry into the causes and prevention of mental and nervous diseases.

Generally speaking, three main questions presented themselves : (1) The important question of the collection of scientific facts, of special literature, and of the legislative procedures of various Governments for the care, control, and prevention of insanity. Depending upon this question was the necessity of establishing an Institute with a paid staff where the work of collective investigation could be carried on. The Committee are at present not in possession of any funds for such a purpose. The official delegates were earnestly requested to appeal to their respective Governments for such subsidies as will enable the Committee to found and carry on such a central bureau, as well as to enable them to publish an official bulletin containing the results of their inquiries. In the meantime the seat of the proposed Institute formed the subject of prolonged discussion. Zürich, Paris, and Rome were suggested. Ultimately, on our suggestion, it was resolved that in view of the great interest manifested by the Italian Government in the work of the Committee, and in view of the fact that H.M. the King of Italy had graciously consented to become patron of the Committee, the Italian members be asked to approach their Government with the object of ascertaining whether that Government might be willing to provide suitable accommodation for the Institute and its officials.

(2) The question of whether the Committee should directly undertake investigations into the causes of insanity was raised by the French delegates, with a proposal that an international laboratory for research of an elaborate and scientific kind should be established in Paris. Such a proposal did not commend itself to the majority of the members, and we gave notice of a motion to the effect that the Committee should, instead of

undertaking direct research themselves, take means to ascertain the kind of work bearing on their objects which is being carried on in various laboratories and institutes throughout the world, and select for encouragement, material assistance and publication the researches of such workers as may appear to them most useful. This motion was unanimously adopted at the second session of the Committee on Friday, October 9th. It will be found embodied in a somewhat amended form in the appended "Statut" resolution 17.

(3) On the question of finance, it was resolved that Governments represented on the Committee should be requested to pay an annual sum towards the expenses of the work of the Committee and towards the publication of an international official bulletin. An amendment moved by the British delegates to the effect that Governments so contributing should have a preponderating voice in the direction of the manner in which the funds of the Committee were expended was practically lost, and now appears only in modified form as resolution 18 of the "Statut" appended. The manner in which it is suggested that such Government subsidies should be paid is detailed in resolution 19 of the "Statut."

The foregoing, among others, are the chief projects of the International Committee on the Causes and Prevention of Insanity. It will be seen that as yet these projects are only in a preliminary and rudimentary stage, and it would therefore be premature to criticise them. In the meantime the Committee requires information, which it proposes to collect, and suggestions as to action, which will no doubt be forthcoming. Above all, it requires money, without which it is unable to proceed. The amount of money at present needed is comparatively small, and were each Government represented to contribute a fixed annual sum for a fixed number of years—say £200 each—we think that until the Committee decided upon undertaking some enterprise of greater magnitude than is at present contemplated the working expenses ought to be fully covered by such a sum. At present, we understand, the expense of the Committee is being defrayed by a small grant from the Italian Government, but we have no official authority for this statement.

Speaking for ourselves, we may say that we went to the meeting of the Committee with some scepticism as to the possi-

bility of any real benefit resulting from its deliberations. We are now, however, inclined to believe that in the following two or three directions the proposals of the Committee may be of service :

(1) They may serve by a diligent collection and collature of fact to establish a scientific knowledge of some of the social causes of insanity, such as insanitary surroundings, alcoholism, under-feeding or improper dietary, especially of children, the inheritance of nervous and mental affections, the influence of certain bodily diseases, and other problems upon which at present it is safe to say opinion is merely speculative.

(2) By acquainting themselves with special forms of technical work carried on in scientific laboratories throughout Europe and America, the Committee may be able to stimulate and co-ordinate certain of these researches and direct them towards the elucidation of problems in the pathology of insanity, which for want of such co-ordination are at present fragmentary and isolated.

(3) By collecting and publishing the methods and regulations of different nations in regard to the care and treatment of the insane, the work of the Committee may prove educative and instructive to all civilised Governments. We conceive that in these and, probably, in other directions as well, the Committee may prove fruitful of good. If it should, fortunately, lead to a practical knowledge of some of the proximate causes of insanity among civilised peoples the expense incurred in its establishment and support would be well-spent money, considering the enormous sums spent in every civilised country on the care of the insane. It has been estimated that in Great Britain alone the cost of lunacy to the country exceeds three million pounds sterling per annum. We do not mean to suggest that any measures are ever likely to be successful in preventing the occurrence of insanity, for it is not one disease or due to any one set of causes. We believe that many of the forms of insanity are originally due to innate germinal variations which cannot be controlled, and which must always occur from time to time even in the most healthy human stocks ; but we cannot doubt that other forms are, if not directly due to, at any rate promoted by, unfavourable social environments and physical diseases, the nature of which is at present imperfectly understood.

For the foregoing reasons we respectfully recommend that His Majesty's Government should join with other Governments in granting such material support to the International Committee, and for such a period of years as will, at any rate, afford an opportunity of judging whether any beneficial or practical results are likely to be attained through its instrumentality.

We also recommend that the reports of the Commissioners in Lunacy for the three Kingdoms, as well as other Government publications on the care of the insane, should be sent to the Institute when it has been established.

The printed "Statut" containing the results of the deliberations of the last meeting of the Committee is appended.

(Signed) JOHN MACPHERSON.  
R. PERCY SMITH.

### *Statut.*

1. L'Institut International pour l'étude des causes des maladies mentales et leur prophylaxie, projeté au Congrès International de l'Assistance des Aliénés à Milan (Septembre 1906), et dont S. M. le Roi d'Italie a daigné accepter le haut patronage, a pour but de réunir et coordonner dans les divers pays toutes les données qui peuvent servir à établir quelles sont les causes principales des maladies mentales et, en général de la dégénération humaine; ainsi que les moyens individuels, législatifs et sociaux, les plus utiles pour leur prévention, et susceptibles d'être diffusés parmi le peuple et sanctionnés par les Gouvernements.

2. L'Institut manifeste son action :

(a) Par le travail d'une *Commission Internationale*, organe fonctionnel de l'Institution, régie par un *Bureau Directif Central*.

(b) Par l'œuvre des différents *Comités Nationaux*, qui ont les mêmes buts et qui sont continuellement en rapport avec le Bureau Directif de la Commission Internationale.

(c) Au moyen de *Congrès Internationaux* pour l'étude des causes et de la prophylaxie des maladies mentales et de la dégénération humaine.

3. La Commission Internationale est composée de Membres



électifs techniques, nommés par les Congrès internationaux et de Délégués officiels nommés par les différents Gouvernements.

4. Les Membres de la Commission Internationale restent en charge pendant 4 ans et peuvent être réélus.

5. Chaque Nation pourra être représentée dans la Commission Internationale par trois membres, au maximum, y compris les Délégués des Gouvernements.

6. La Commission Internationale choisit dans son sein le Bureau qui sera composé d'un Président, d'un Vice-Président, de trois Conseillers et de deux Secrétaires, dont un fonctionne comme Trésorier. Le Bureau reste en charge quatre ans et peut être réélu.

7. Dans chaque Nation qui fait partie de l'Institut, les représentants sont chargés de former des Comités Nationaux pour l'étude des causes et de la prophylaxie des maladies mentales. Un au moins de ces représentants fera partie de droit du Bureau Directif du Comité National respectif.

8. Les Comités Nationaux doivent contribuer aux travaux de la Commission Internationale et du Bureau Central, surtout en rassemblant toutes les données statistiques, cliniques, etc., qui puissent être utiles pour la détermination des causes de la dégénération en général, et particulièrement de la folie, et aussi des moyens pour leur prévention. Par les soins de la Direction de chaque Comité National ces données devront être transmises périodiquement au Bureau Central de l'Institut, avec les Rapports des Délégués sur les progrès de la Législation et sur les mesures de prévention adoptées dans chaque pays contre la dégénération et la folie.

9. Les Délégués nommés par le Gouvernement de chaque Nation chercheront à obtenir de leur Gouvernement toutes les données nécessaires aux travaux de l'Institut et tâcheront de conserver à l'Institution l'appui moral et matériel des Gouvernements.

10. La Commission Internationale se réunira en assemblée ordinaire une fois par an, de préférence en coïncidence avec les Congrès Internationaux indiqués dans l'Art 2.

11. Le Bureau central se réunit aussi une fois par an et toujours avant la convocation de la Commission Internationale.

12. Les convocations du Bureau et de la Commission Internationale sont faites par le Président, au moyen d'un des Secrétaires.

13. Dans ses réunions le Bureau :

(a) Collectionne et coordonne les données et les propositions qu'il a reçues des différents Comités Nationaux et de leurs Délégués.

(b) Rédige les questionnaires qui seront distribués aux Comités pour des recherches ultérieures.

(c) Fait la distribution, parmi les membres du Bureau, du travail de coordination et de synthèse des données reçues, et établit quelles propositions devront être présentées à la Commission Internationale.

(d) Rédige le bilan conscriptif de chaque année, et prépare le bilan de prévision pour l'année suivante ; bilans qui devront être soumis à l'examen de la Commission Internationale.

(e) Pourvoit à l'organisation et à la convocation des Congrès Internationaux.

14. Les Congrès Internationaux auront lieu tous les deux ans dans la localité qui sera choisie par le Congrès précédent. Ils coïncideront, si possible, avec les Congrès Internationaux pour l'Assistance des Aliénés.

15. Le Bureau sera toujours en relation avec les Sociétés scientifiques et humanitaires qui poursuivent des buts analogues à ceux de l'Institut, et avec les personnes remarquables qui par leurs études ou leurs œuvres pourront être utiles aux travaux de l'Institut.

16. Le Bureau pourvoit à la publication d'un ' Bulletin Officiel International,' dans lequel paraîtront :

(a) Les comptes-rendus des séances du Bureau et de la Commission Internationale ;

(b) Les comptes-rendus des Congrès Internationaux et les résués des Congrès traitant des matières qui intéressent l'Institut ;

(c) Les rapports présentés à la Commission Internationale ;

(d) Les Lois et les Règlements des différents États en rapport avec les buts de l'Institut ;

(e) Les projets de Loi dans le même sens présentés aux différents Parlements ;

(f) Les informations statistiques sur les maladies mentales dans les différents pays, recueillies d'après des formulaires uniformes, et les rapports des Délégués sur les progrès de la législation et de la prévention dans les différents pays ;

(g) Les mémoires scientifiques d'un intérêt général remar-

quable relatifs au but de l'Institut, les résumés et les indications bibliographiques et toutes les nouvelles qui peuvent intéresser et contribuer aux buts de l'Institut.

17. La Commission aura soin de se procurer aussitôt que possible tous les rapports et tous les travaux publiés par les différents Laboratoires physiologiques, psychologiques, anthropologiques, etc., afin de pouvoir faire un choix de tous les travaux spéciaux relatifs aux causes et à la prophylaxie de la folie. La Commission interviendra matériellement pour la publication dans le Bulletin de tous les travaux qu'elle aura choisis.

Elle prendra aussi l'initiative de nouvelles recherches sur les causes et les conditions pathogéniques de la folie dans les Cliniques et les Laboratoires subventionnés à cet effet ; elle aidera aussi autant que possible les recherches individuelles.

18. La Commission prendra spécialement en considération les propositions des différents gouvernements faites par l'intermédiaire de leurs délégués.

19. Les Gouvernements qui par leurs Délégués Officiels feront partie de l'Institut, seront invités à verser une somme annuelle pour les frais de son fonctionnement et pour la publication du Bulletin Officiel International. Ces sommes seront versées par la voie des différents Ministères des Affaires Etrangères, à la "Caisse des Dépôts et des Prêts" de la Nation qui sera élue comme Siège central de l'Institut, et seront retirées, d'après les besoins, par des ordres d'office du Président de la Commission Internationale. Cela indépendamment de la contribution que chaque Gouvernement pourra allouer à son Comité National.

20. Les finances de l'Institut seront sous le contrôle du Gouvernement du pays dans lequel se trouvera l'Institut.

21. Les finances de l'Institut pourront être augmentées par les dons des pouvoirs publics et des personnes qui auront la noble intention de contribuer à l'œuvre de prévention de la folie. Les personnes ou les corps constitués qui verseront une somme d'au moins Frs. 1,000 mériteront le titre de Membres Bienfaiteurs.

22. Le Bulletin Officiel International, qui sera publié tout les trois mois, sera envoyé :

(a) Aux Gouvernements qui auront adhéré à l'Institution

(b) Aux Membres de la Commission Internationale qui auront payé une cotisation de 20 francs par an ;

(c) Aux Sociétés savantes, aux bibliothèques, aux Instituts et aux privés qui auront payé la même cotisation.

23. Les rapports et les mémoires seront publiés en allemand, anglais, français et italien. Les mémoires originaux seront publiés dans une des quatre langues, choisie par l'auteur; il en sera publié un résumé dans les autres langues. Les informations seront publiées dans les quatre langues.

24. Le Bureau nommera un *personnel rétribué* pour les travaux de l'Institut, pour la correspondance, la comptabilité, etc., et pour la publication du Bulletin. Ce Bureau aura sa résidence dans le Siège central de l'Institut.

### Part I.—Original Articles.

*Insanity as Disorder of Conduct.* By CHARLES MERCIER,  
M.D., F.R.C.P.

IT is with considerable diffidence that I bring this subject before such an Association as this. I should have the same feeling were I to argue before the Mathematical Society for the merits of the Multiplication Table, or before the Astronomical Society in favour of the Law of Gravitation. It is a matter that I have regarded as an axiom for the last five and twenty years, and that I fondly thought was established as a fundamental doctrine of alienism. My astonishment was great therefore, when, at a recent meeting of the Education Committee of this Association, my proposal, that the doctrine should find expression in the syllabus of subjects for the diploma in Psychiatry did not find a single supporter. The experience carried me back to the early years of my membership of this Association, when I constantly found myself in a minority of one in advocating views which are now become commonplaces. It seems, therefore, necessary to bring the matter formally before you, and to argue it out; and here I am in the difficulty felt by everyone who tries to prove formally what seems to him self-evident. I believe that things that are equal to the same thing are equal to one another. I do not know whether any of the members present share this belief.



If they believe that conduct is of no importance in insanity, the same cast of mind may very well cause them to believe that things that are equal to the same thing are greater than one another, or that two straight lines can enclose a space, or that things that are unsupported fly upwards. But if they do believe that things that are equal to the same thing are equal to one another, they would have considerable difficulty in giving a reason for the faith that is in them. If I question the truth of it, and ask what are the grounds of their belief, I think I should place them in a quandary. I am in a similar quandary in demonstrating that disorder of Conduct is the prime element in Insanity.

I think I am correctly stating the doctrine, that I fondly thought I had exploded five and twenty years ago, when I say that it regards Insanity and disorder of mind as convertible terms. Insanity is disorder of mind, and disorder of mind is Insanity. This I utterly, and totally, and strenuously deny. Nearly every day I see cases of disorder of mind that it would be an outrage, and worse, it would be a blunder, to call Insanity; and very often I see cases of Insanity in which disorder of mind is neglectable, and does not enter into the consideration of the case. Let me give a few instances. A man occupying a high position in the service of the State, the duties of which he performs with great ability, suffers acutely from claustrophobia. He dreads a railway journey, and finds it impossible to travel with the window shut. He always travels with a railway rug in straps, and in the hottest weather he covers his legs with the rug, to conceal the fact that he has strapped his legs together to prevent himself from making a sudden rush from the carriage. When he is in any small closed space he is in an unreasonable panic; but he is as far removed from insanity as you or I, for he knows as well as you or I that his panic is unreasonable. He can no more help feeling the panic in appropriate circumstances than you or I can help feeling drowsy during a Presidential address in this room. But—this is the point—his conduct has nothing abnormal in it. What he does is to take a reasonable, sane, judicious precaution against the consequences of his disorder, and in this sane conduct he proves his sanity in spite of the disorder of his mind.

Some of you may say, erroneously as I think, but you may

say that such a case as this is a borderline case—a little more and he would have stepped over the border and become insane—and that the disorder of mind, if it was not actual insanity, partook of the nature of insanity. I will therefore take another case, which will I think put the matter out of doubt. At the present time I have two patients who are affected by a most distressing form of giddiness. They feel as if the ground were constantly swaying about, like the deck of a ship at sea. They walk with uncertainty and difficulty. One of them has repeatedly fallen, owing to this apparent movement of the ground. The other feels it even when sitting down; and always holds on to the arms of her chair or to the table, or some other fixed object, for fear she should sway off her seat and fall. Now, giddiness, I beg leave to remind you, is a disorder of mind. It is an abnormal feeling. Oh! but, you say, it is due to some nerve lesion. It is an affection of the ocular muscles, or of the semi-circular canals. No doubt it is due to the messages sent to the cortex from the retina, or the ocular muscles, or the semi-circular canals, or elsewhere; but the giddiness itself is as distinct from the nerve lesion, or the molecular nerve current, as mind is distinct from matter. The giddiness is a feeling of giddiness. It is a misinterpretation of the relative positions and movements of surrounding objects, or of oneself with respect to surrounding objects; and interpretation and misinterpretation are purely mental processes. The disorder is, no doubt, founded on a physical lesion and the result of a physical lesion, and so, we believe, is insanity, but it is itself a disorder in the mind. No doubt the mind correctly interprets the sensations that are received, and it is the sensations that are erroneous; but again, sensations are mental, not material facts. The mind works correctly on the material presented to it, and this correct working keeps the disorder within the range of sanity. But the material presented is mental material, and this material is erroneous. It is mental disorder. If there are any who think that giddiness is a bodily disorder itself, apart from its foundations, I respectfully submit that until they recognise the limits of the mental and the physical—the distinction between mind and matter—they have no *locus standi* in this discussion.

Now take another case. Shortly after I was qualified, as I was sitting in my uncle's surgery reading for my next examina-

tion, a man rushed in, took up a chair, and before I could say "knife," if I had wanted to say it—as a matter of fact it did not occur to me—but before I could have said "knife," he had smashed with the chair every pane of glass in the window, and lifted the chair to add my head to the general smash. I had never seen the man before, nor had he seen me to my knowledge. We were entire strangers. Under these circumstances, ought I to have examined into the state of my visitor's mind before forming an opinion on his sanity? Was I to find out whether he had a delusion, and whether that delusion so influenced his mind as to cause him to act otherwise than he would have acted if he had not had it? According to what I must now suppose to be the prevailing and orthodox view of insanity, I ought to have done so, but I did not. I went out of the room—I do not say hurriedly; I may have gone leisurely—I don't clearly remember. It was a long time ago. But I went. I went over to the police-station opposite, and told the sergeant on duty that there was a madman in the surgery. Was I justified in making this statement? As I understand the doctrine of insanity which I must suppose is prevalent, I was not. Insanity is disorder of mind, and I knew nothing whatever about this man's mind. For aught I knew he might have had the minds of Socrates and Aristotle, of Sir Isaac Newton and Herbert Spencer all rolled into one. But I did not concern myself about it. I rested my diagnosis of his insanity purely and solely on what I had seen him *do*—in fact, on his conduct, and in this I submit that I was justified.

Take yet another case. Some year or so ago I certified and sent to an asylum a gentleman in whom neither I, nor anyone else could detect the slightest intellectual disorder. In conversation, in argument, in astuteness, he appeared to be immaculately sane. I rested my opinion of his insanity entirely upon a long course of conduct, extending from the age of six down to the age of thirty. It took several sheets of foolscap to set forth all the facts indicating insanity that were communicated to me by others, and in all this narrative no reference whatever was made to his mind. The whole judgment was based on conduct and on conduct alone; and this certificate was accepted by the magistrate who made the order, and by the Commissioners who assented to his detention.

One case more, and this a brief one. I was once introduced

to a lady, who immediately spat in my face. I sat down at once and certified that she was insane. I did not interchange a word with her. I knew nothing, and to this day I know nothing of the state of her mind. I regarded that as altogether beside the question, and I think so still.

Of course, when I say that insanity is disorder of conduct, I shall be understood to deny that disorder of mind exists in insanity, and I know by experience that it is very little use to combat this interpretation of my doctrine. It is due to myself to try, however. I proclaim, therefore, that disorder of mind is, as far as we know, always present in insanity—as far as we know, I say, for our knowledge of other people's minds is always more or less conjectural. But the point, the gravamen, the nucleus, the crux of the matter is this, that unless it is expressed in conduct, or unless it is a guide to the conduct that may be expected, the state of a person's mind does not matter a straw to the alienist. So long as a man's conduct is normal in all the relations of life, it does not matter a straw if his mind is as full of delusions as an egg is full of meat, or a beehive of bees, or a herring of bones. For aught you know to the contrary, my mind may be at the present moment swarming with delusions. For aught I know to the contrary, you may all be possessed with the most irrational and preposterous notions about what is to be expected, for instance, from Tariff Reform, or from the abolition of the House of Lords. But if, notwithstanding, he acts capably and with propriety in all the relations of life, then I say, it does not matter a straw whether a man's mind is disordered or not, he is for all practical purposes sane. He is not to be deprived of his liberty; he is not to be sequestered from the management of his estate; he is not to be deemed incapable of making a will or a contract, or from transacting other business; he is not to be held immune from punishment if he commits a crime. The question of his insanity does not arise.

For us it is conduct, and conduct alone, that matters. What we are to investigate, and what we are to treat, is not what is going on in a man's mind, but the way he behaves. One of the elementary lessons that I give to my elementary class, is that the facts indicating insanity that they are to put into a certificate are to be facts, and facts observed by themselves; and this excludes all the states and processes of mind of every sort, kind and



description. That a person has a delusion may be a fact, but if it be, it is a fact that cannot be observed by anyone else. What a person thinks, or feels, or knows, or believes, or wills, or desires, or hopes, or fears ; whether he is joyous, or miserable, or apprehensive, or suspicious, or exalted, or confident, or hopeful, or despairing, is for ever beyond our direct observation. We cannot observe what is passing in another man's mind. We can only infer it from what he says, and what he does, and how he looks ; and these are all phases of conduct. They are not states of mind. If a man tells me he is the Emperor of the Universe or that he is the Awful of Awfuls, does he thereby enable me to see into his mind and observe what he thinks or feels ? No ; all that I can observe is that he says so. Whether he really thinks so, or feels so, I cannot observe. I may infer from other circumstances, from his looks, acts and demeanour, that he is speaking the truth ; but he may be lying merely, and whether he is truthful, or whether he is lying, I can no more observe what is passing in his mind than I can observe what is on the other side of the moon. I apologise for inflicting these truisms upon you ; I should never have done so if I had not been driven to it, but it is impossible to insist too strongly that all the knowledge we have of the minds of other people is conjectural, and is inferred from conduct. And when we have that knowledge of another person's mind, it is of no value, it is of no consequence, it is of no importance, except as it indicates what his conduct is likely to be. In any case, if we take mind into consideration, we must infer it from conduct ; and from mind we infer back to conduct. Why not take conduct, which, and which alone, is open to direct observation, and rest our judgment of sanity directly upon that ?

Another whole class of corroboratory facts, if corroboration were needed, is found in observation of post-epileptic automatism. I have seen persons in post-epileptic automatism so behave as to pass muster as normal persons. No one who was present, except myself, had any reason to suppose that they were other than normal sane persons, so perfectly did the automatic conduct mimic normal conduct. Yet, as far as it is possible to judge, these persons were mere automata without any mind at all at the time. Suppose this state to be prolonged, as there is some reason to think it has been prolonged, for days, months, or years, what reason, what excuse, what occasion, should we

have for pronouncing such persons insane? Supposing that they went about their business, bought and sold, married and were given in marriage, performed all their duties to themselves, their families and society, in a normal manner, what is it to a bystander whether they have minds or not? It would never occur to any onlooker to raise the question. They would go to their graves with the reputation of having been sane all their lives, and yet they would have had no more mind than a Jacquard loom, which can do things as intelligent as a human being.

Our interest in other human beings lies in what they say and do; and not in what they feel and think, except in as far as their feelings and thoughts are a guide, or an index, to what they may say and do. If they say and do insane things, they are insane, whatever the state of their minds may be. If they do not say or do anything insane, the question of their insanity does not arise. It never occurs to us to raise the question.

In a conversation I had the other day with one of the members of the Education Committee who voted against me on the occasion in question, I learnt that he made no distinction whatever between mind and conduct; and in the provisional syllabus that has been distributed, you will find that some phases of Conduct are included under Psychology. It is difficult to treat this opinion with respect. I have a great respect for the gentleman himself, but if I am asked to treat this opinion with respect, you must excuse me. I will consent to regard Conduct as a branch of Psychology when you show me how to equate the smell of lavender with the Houses of Parliament, or when you can propel a battleship by a feeling of consternation. The universe of matter and motion lies on one side of a gulf, and the universe of mind lies on the other. The gulf is bottomless, and its width and length stretch to infinity. When we can jump from the earth to the pole-star, and from the pole-star to the Southern Cross, then perhaps we may go into training for the far more difficult task of equating the movements of matter with the processes of mind.

But where, it may be said, does all this lead to? It may or may not be an interesting academical disquisition, but what is its practical moment? It is this. If Insanity is a disorder of Conduct, surely Conduct is worth study. One heretical doctrine that I preached five and twenty years ago is now

become orthodox. I then said, if Insanity is disorder of mind, surely it is incumbent on us to study that which in Insanity is disordered. We learn Physiology before we study Pathology, and surely, in Insanity also, the Science of the Normal should precede the Science of the Morbid. In that respect we are happily agreed. We are all Psychologists now, and I vainly imagined that this second doctrine, that I preached at the same time, was also accepted. But I have been rudely wakened from my dream. The Education Committee with unanimous voice has refused to erect Conduct into a separate branch of Study, or give it a separate heading in the Syllabus. It is to be content with two or three widely separated sub-headings of Psychology.

Well, gentlemen, whether Conduct is worth study or not is a question that I hope to hear debated this afternoon, but whether any branch of Conduct can be included in Psychology does not admit of debate. If you included the construction of the steam engine in a syllabus of Counterpoint and Harmony, or if you included the drafting of Parliamentary Bills as a branch of Astronomy you would not go farther astray. The things are disparate in nature, and by no effort and by no artifice can they be brought together. The subject of Psychology is what goes on in the mind. The subject of Ethology, the Science of Conduct, is what men do and say. Doubtless, what we do and say expresses, with what accuracy we can compass, the thoughts and feelings we have in our minds ; but what we do and say are no more thoughts than the ink-marks on the paper I am reading to you are thoughts.

My thesis is that Conduct is not only a proper subject of study for the alienist, but that it is *the* subject of study. It ranks in importance before all else, and should be studied by the alienist at least as systematically as mind, or as the anatomy of the brain. But again, it will be objected that there is no book on the subject—as if things had not to be studied outside of books before they can be put into books! We have the subject matter of the study constantly before us all our lives. in both its normal and its morbid aspects. All we have to do is to observe what goes on around us ; and for books, every novel is a study of some phases of conduct, unless it is a so-called psychological novel, and that, I am glad to hear, is now out of fashion.

I wonder whether the members of this Association realise the meaning and effect of regarding insanity as a disorder of mind, instead of primarily a disorder of conduct. Some part of the effect is seen in the proposed syllabus for post graduate instruction, which is now before the Association. In this we find that importance is attached to investigating the reaction time of our patients ; we are to discover their æsthetic sentiments ; we are to find out their ideation type ; we are to test them with the ergograph ; we are to inquire into the synthesis of their consciousness ; we are to discover their faculty of space perception and time perception : but whether or not they can earn their living we need not inquire ; whether they are drunkards, or profligates, or prodigals, are matters of no importance ; we need no information about suicidal attempts. Whether our patient is a miser, or a spendthrift ; whether he hoards rubbish or collects stamps ; whether he is filthy in his habits, or maniacal in his fury ; whether he adorns himself with tawdry ornaments, or tears up his clothing ; whether he tries to murder his wife and children, or runs amok in the streets, shooting unoffending wayfarers, all these are to us, as alienists, matters of profound indifference. We need pay no attention to them. They are unworthy of our consideration. To teach students that persons in acute insanity are apt to commit suicide is of no importance whatever. What is of importance is that we should take their reaction time, and test them with the ergograph. That is what students are to be taught. Gentlemen, I submit that this doctrine is mediæval, crude and profoundly erroneous ; and I submit, moreover, that no one who professes or pretends to hold it bases his practice upon it. You may pay it the lip service of saying that insanity is disorder of mind, but when you investigate your cases do you confine your investigation to the state of their thoughts and feelings, and pay no attention whatever to what they say or do ? I am sure you do not. You have too much sense. But if conduct is to be investigated at all, is it not worth while to investigate it systematically ? Can it be investigated systematically ? Is there a science of Conduct ? I say there is. It is not recognised. It is formulated in no book, but I have drawn up a syllabus on the subject which is my guide in lecturing to my students, who are taught that the study of Conduct is the primary and essential and fundamental study in Alienism, and



such a syllabus should, I submit, appear in the syllabus of subjects required of candidates for degrees in Psychiatry.

#### DISCUSSION,

At the Quarterly Meeting held in London, May 24th, 1910.

Dr. SAVAGE said it had given him great pleasure to listen to what he expected would be a treat. It was a great thing to encounter Dr. Mercier when he was in a destructive frame of mind. One could never feel quite sure whether he would not be extremely materialistic to-day, and immaterialistic to-morrow. But at all events he had provided food for thought. Dr. Savage assumed that all who were engaged in treating the insane did recognise the necessity of observing their conduct. Certain certificates which he had signed and which had been accepted had been very wide of the mark in regard to facts observed by himself. With regard to Dr. Mercier's remark that a man might be as mad as possible and yet his conduct be all right, he remembered getting a man removed from a public asylum, who had been there more than a year, and who had hallucinations of hearing of a most marked description. This patient said, "All the difference between you and me is, that you have a subjective thought which does not influence your conduct; I have an objective thought which does not influence my conduct either." But take the man who was in Bethlem Hospital; he had a suggestive consciousness which said, "Knock somebody down," and he did it. Both men had hallucinations of hearing; in one, conduct was not influenced; in the other, it was. The one, Dr. Savage considered, should not be treated as insane, the other should. He felt very grateful to Dr. Mercier for having so clearly pointed out the necessity of looking at insanity from the practical point of view, and not entirely from the scientific standpoint. He hoped that they were not going to exclude science, nor to go back to practically classifying by symptoms. Some would say that was the danger. One must fight against the attitude of regarding conduct alone as the criterion of a man's insanity, and one must investigate the process of reasoning on which the conduct was based.

Dr. W. H. B. STODDART said he was very pleased to hear that he had gained the respect of so eminent a man as Dr. Mercier, but sorry to learn that his opinion did not meet with that respect. He agreed to a large extent with Dr. Mercier that conduct was a criterion of insanity (Dr. Mercier: *The criterion*). But the point was that he, Dr. Stoddart, regarded conduct as a part of mind, and that was where they parted company. It was a large subject to attack in a meeting of that kind. The difficulty was that it was necessary to draw the line between conduct and what Dr. Mercier regarded as mind. Conduct appeared to be something muscular; but he took it that one could not stop at the muscles and not enter the nervous system at all. Conduct must be some co-ordinated action, and as long as muscular action became co-ordinated it took one into the nervous system and inside the skull. It was very difficult to say where the study of conduct was to leave off and where the study of psychology was to begin. The only point on which he differed from Dr. Mercier was that he wished to include conduct in the study of psychology.

Dr. STEEN remarked that Dr. Mercier stated that when conduct was disordered there was disorder of mind. He wished to ask whether the converse was true. When conduct was not disordered, was there no disorder of mind? He had in mind the case of a young girl, the history of whose past life would fill many pages of foolscap. She was certified as insane and sent to the City of London Asylum. She was a private patient. At the end of one month from admission she, of course, had to be certified to the Commissioners as insane. There had been no disorder of conduct during that month, but her certificate was written. At the end of a year she had again to be certified as insane, yet during that time there had been no disorder of conduct, and no other mental disorder that he could discover. He felt, and knew from her past history, that she was a moral imbecile, or was morally insane, and yet there was no disorder of conduct. What was the superintendent of an asylum to do with such a case as that if conduct was to be the only criterion?

Dr. DRAPES said he thought that if Dr. Mercier had used the word "certifiable" before "insanity," his remarks would have been apt. But surely Dr. Mercier did not wish to press the point that there was no insanity except that which showed itself in conduct. One was taught that the mind consisted of three principal departments—intellect, emotion, and will; and that insanity might show itself as a disorder of any of those, or of all together. One was also taught that disorders of will revealed themselves in conduct. But did there not exist, underlying every action a man committed, whether he was sane or insane, a mental condition which prompted the act? If Dr. Mercier's views were carried out practically, he, Dr. Drapes, thought the occupation of the alienist would be gone, because the man in the street would be as good a judge whether a man was insane as would be a skilled psychologist. What the alienist had to do was to give some explanation of the man's conduct. That could only be done by reference to the man's mental condition as a whole.

Dr. URQUHART said it was a real pleasure for him to come to London to find Dr. Mercier so happy in the sunshine that he could afford to go back twenty or thirty years in his life and to reproduce his old ideas, which were very familiar to alienists there. He feared that Dr. Mercier had that day rather mistaken his audience; he must have meant to address the Medico-Legal Society rather than the Medico-Psychological. Those who had to endure the rough and tumble of the Courts would highly value the direct and effective reasoning by which Dr. Mercier introduced and maintained his thesis. But the trouble was that it was not a doctor's paper, and it did not in any way set forth a physician's opinion. If insanity was merely disorder of conduct, then it was more of a legal than a medical question. Of course one had to address oneself to the legal question as well as to the medical one; but it was comparatively irrelevant to members of that Association what was the legal question in connection with insanity: the insanity which was a disease of the brain, or the brain affection caused by bodily disorder. Dr. Mercier resembled a man who gave a minute account of a disordered rheumatoid arthritic joint, without the slightest consideration of what preceded the condition. What was the reason of the disability of the joint in conduct? That was the question which alienists were still face to face with to-day. It was a medical question, and the question of all questions: What was it which led to the disorder of conduct? What terrible catastrophe had befallen the person? What was to be done to restore that person? Or, still more, what was to be done to prevent disorder of conduct, which was a late symptom, and one of secondary importance to the physician? He thought that their standpoint, to be effective, must command far more than Dr. Mercier said. He did not suspect what Dr. Mercier's thesis was until he produced it towards the end of his address; he did not know it was an attack upon an unfortunate syllabus. How difficult it was to write a synopsis for the Association. It had no personality about it; the whole work of a Committee was watered down to the meanest intelligence. Whenever a man serving on a Committee had a good idea and produced it with fatherly pride, it was of short-lived duration; he found he had talked too high or too low, too broad or too narrow, and the consequence was that the Association got something which was safe. Dr. Mercier had taken that course on the present occasion: he was the safe man talking to "mad doctors." But had he enlightened them as physicians? Did they know now more than they had learnt from Dr. Mercier himself twenty-five years ago? He did not think so.

Dr. DIXON said he wished to ask Dr. Mercier, if one was to regard insanity as merely a disorder of conduct, without any reference to the supposed state of the mind which led to that disordered conduct, how one was to provide accommodation for all the people in this country whose conduct was found to be disordered from day to day. At the present time it appeared that if the conduct was disordered, the policeman or some other guardian of the public came to the rescue of the community. But if all the people whose conduct was disordered were to be considered insane, he feared that the asylum accommodation, if they were to be incarcerated there, would have to be very much increased.

Dr. BEDFORD PIERCE desired to ask Dr. Mercier a question. He understood the thesis to be that there was no insanity without disorder of conduct. If that were true we could have no knowledge of insanity unless we discovered some disorder of conduct. How would Dr. Mercier speak of the person who was troubled with obsessions to murder? He knew a gentleman who came to the Retreat at York

willingly because he wished to be kept there as a protection against himself; he was under the fear that he would murder his children. The conduct, in coming to that institution, was not insane; he was acting reasonably to prevent himself doing an evil. Unless the fact of speaking of such things was called conduct, he would have thought the man was insane although his conduct was correct.

Dr. LANGDON DOWN said conduct was the text by which the mind was read. It was necessary to go through the process from conduct to mind, and from mind back again to conduct, because without that connecting link there was no reason why one act should be succeeded by any other similar act. Therefore it would be wrong to infer future conduct from past, unless one had that basis, that there was a connection between conduct and mind, and between mind and conduct again. It was as if Dr. Mercier were to say they were to read the text which would be seen in the book when it came to be printed, and that the mental condition of the writer was an inference which did not matter. The text was studied with the view to inferring the mental condition. The mental and the physical formed one series of events, and although philosophically one could not connect them up, it was a mistake to neglect the connection in practical psychiatry. Surely the analogy which the author laid before the meeting was incorrect in the case in which he called giddiness a disorder of mind. The mind of that patient, for all the observer knew, might be correctly reacting on the impulses submitted to it; just as Dr. Mercier had held that the man who tied his legs together in a railway train was not showing disordered conduct, because his conduct was reacting correctly in interpreting his feelings.

Dr. RAYNER said that some years ago Dr. Mercier and he saw together a surgeon who had performed upon himself a most complex operation, involving elaborate insanity of conduct. Still, although the act, judged simply as an act, was absolutely insane, it was concluded that he might have his liberty, and so he was not sent to an asylum.

The PRESIDENT said he had but few remarks to offer on the paper. In conjunction with all present, he was much indebted to Dr. Mercier for his very racy and enlightening paper. He very closely associated himself with Dr. Mercier's rendering of the subject. The point of the paper was that Dr. Mercier took the legal consideration almost apart from the medical. He waived away with the hand at once the legal fiction of delusion as being the necessary proof of insanity; also he dismissed all other mental manifestations as proofs of insanity, and went at once, as a true neurological student, to objective phenomena, and examined the mental reflexes of conduct—if Dr. Mercier would allow the term—and in that case one found him so pre-eminently practical. He agreed that conduct should be taken very widely into consideration; but he had always found a stumbling-block in his way, and he would like it removed—namely, how to deal with crime. If one took disorders of conduct into consideration, then, as a speaker had already remarked, our asylums would soon be over full. If one took into consideration all forms of disordered conduct which embraced the criminal also he did not see how one could dissociate the two without going further back to mental phenomena and investigating for oneself, whether the act so performed was the result of what was usually called insanity, or was of a criminal nature. Possibly Dr. Mercier might be going further than himself in his definition of crime. But there was a line to be drawn, and it would often be most difficult to solve the question in the courts.

Dr. MERCIER, in reply, said that he could not understand anybody holding the opinions which Dr. Stoddart held on that subject. That gentleman said that conduct took one right up the nervous system into the skull. Dr. Stoddart said that the only point on which they differed was that one included conduct in psychology, whereas the other did not. That was only one of the points on which there was a difference between them; but it was quite true that it was the point upon which he laid stress. He had already given reasons why he did not include conduct in psychology. Therefore they must agree to differ. Dr. Steen had asked him if the converse was true. But it was not exactly the converse. He said that when conduct was disordered there was disorder of mind; and Dr. Steen asked whether when conduct was not disordered there was no disorder of mind. He tried to give many instances in which there had been no disorder of conduct, and yet plenty of disorder of mind. He could have reeled off such instances by the score and by the hundred. And that was his point, showing that there



could be disorder of mind and yet no disorder of conduct. Dr. Steen brought forward a case of moral insanity, and said that that unfortunate young lady was the subject of moral insanity, but he could not, on the assumption that conduct was to be the sole criterion of insanity, give a continuation order, because he had not observed in her any insane conduct. If she evinced no insane conduct he did not see how she could be certified. If she was not insane in her conduct, then, for the alienist's purpose, she was not insane at all. But it was possible she might not be insane. And he thought it was almost certainly the case that the reason she did not appear to be insane was because Dr. Steen had given her such excellent care. But if she were relieved of that care she would probably evince her insanity once more. (Dr. Steen: "But what ought the superintendent to do?") Our judges invariably declined to answer hypothetical cases, and they were celebrated for their wisdom. Dr. Drapes spoke about disorder of will, and contended that such were the only disorders of mind which issued in conduct. He did not agree with that. He believed that disorders of all the subdivisions of mind might have their counterparts in disorders of conduct, not merely disorders of will. His friend, Dr. Urquhart, said the paper was not a doctor's paper, and that it should have been read before the Medico-Legal Society; that if insanity was merely a disorder of conduct, it was legal only. He did not follow Dr. Urquhart in that; he did not see why that view should be held. The paper was provoked by the extraordinary and reprehensible conduct of the Education Committee, which refused to support him by a single vote when he desired to introduce the study of conduct as an element in the syllabus. He was not contending that there was no disorder of mind in insanity; he was not contending that conduct was the only thing disordered in insanity; what he was contending for was the systematic study of conduct, for its erection into its proper position as the primary but not the sole element in insanity. Dr. Urquhart had said that he (Dr. Mercier) was only saying over again what he said twenty-five years ago. That was true, but unfortunately, twenty-five years ago the seed fell on barren soil; apparently it was sown on stony ground, and had never fructified. Therefore, there was surely no harm in sowing again and expecting a better harvest at some future time. Still, he was glad to see that opinion had moved a little since those old days. He had been asked whether disordered conduct did not mean crime, and how one was to distinguish between disordered conduct which meant insanity, and disordered conduct which meant crime. It seemed to be assumed that if one regarded insanity as disorder of conduct, therefore one must include crime as insanity. He repudiated any such notion. That such a notion could be conceived showed that we had no proper conception of what disorder of conduct consisted in; and until conduct and disorders of it were systematically studied, such a mistake would continue to be made. He did not believe that anyone had upheld more than he had the doctrine of the unescapable responsibility of every person for his or her acts; and he had never regarded insanity and crime as convertible terms. Dr. Bedford Pierce had put a very difficult case to him, that of obsession to murder; and he asked the question whether such a person as he mentioned, who came to him and placed himself under care because he had an obsession to murder his children, was sane or insane. The answer he would give was, Look at the man's conduct; what did he do? He had that disorder in his mind; what was his conduct in consequence? His conduct was the sanest thing he could do, namely, putting himself under Dr. Pierce's care. What more sane thing could he have done? Surely he proved his sanity by his conduct. If instead of putting himself under care he had cut his children's throats, the situation would have been altogether different. It was Dr. Langdon Down who had placed his finger on what was apparently the weak point of the position. Of course, undue neglect of a study of conduct and its disorders had led him, Dr. Mercier, to place an amount of stress upon it which appeared to give it an exaggerated importance, to elevate it into too prominent a position. He repudiated any idea that he believed that mind should be altogether neglected. One must, and one did, argue from conduct back to mind, and from mind back again to conduct; and mind formed a bond of union, a link of association between conduct now and conduct following, and both must be studied. But the study of insanity was not complete when mind alone was studied; nor was it complete by the study of conduct alone. Insanity was only fully studied by the co-ordinated consideration of mind and conduct. Hitherto the study of insanity had been restricted too



much to one of those aspects, to the neglect of a systematic study of conduct. He remembered the case which Dr. Rayner reminded him of, and it was a very astounding one. It was a case in which the man's conduct was extraordinarily disordered, but Dr. Rayner and he could not discover a disorder of mind. The surgeon was not certified; they agreed that he should not be, but that was not because his disorder was one of conduct and not of mind, but because they were both convinced that there was no prospect of a repetition of that disordered conduct. Dr. Rayner would doubtless bear him out in that. Had it been thought that there was reasonable ground for believing that such conduct was likely to be repeated, they would undoubtedly have certified him. (Dr. Rayner signified his assent.) His point was therefore proved. He had already met the President's objection that the acceptance of the idea that insanity was disorder of conduct would lead to confusion between insanity and crime. He was sure it would not. It was only because conduct had not been systematically studied that the confusion existed; and if conduct were studied as such, that confusion would not be increased, but, on the contrary, would be cleared up.

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*A Theory of the Toxic and Exhaustion Psychoses.*

By W. H. B. STODDART, M.D., F.R.C.P., Assistant Physician, Bethlem Royal Hospital.

MR. PRESIDENT AND GENTLEMEN,—I have had a little difficulty with my title, because the disease to which I want to refer is known under so many names. "Exhaustion psychosis" is one, and the same disease is also described as "post-febrile insanity," "acute confusional insanity" and "acute hallucinatory insanity"; while on the Continent, I think, psychiatrists are unanimous in applying to it the name "amentia." But "amentia" in this country has a different meaning, so that we cannot adopt that term here. Having, however, given you the list of names by which the condition is known, you will recognise the disease to which I refer.

It has several causes, but if you examine the cases you will find that they all have the same series of symptoms. It arises as the result of toxæmias of various kinds, mainly those following acute fevers. It is also caused by such poisons as alcohol, belladonna and hashish. We find the same disease following physical and mental exhaustion; one has seen it in men who have undergone severe physical strain: for instance, I saw one case in a man who had run a five mile race and won it. It also occurs after mental exhaustion. One sees it perhaps most commonly in people who have been working for examinations. Lastly, it may be the result of mental shock; one sees it in patients who have suddenly lost friends, and it comes on quite suddenly in some patients. For instance, I

think of one particular case of a girl who woke up one morning to find herself beside the dead body of her grandmother. In another case a man was working in his shop when he saw his mate hauled up by the strap of his machine.

One of the most characteristic symptoms is *peripheral anæsthesia*, mostly of the arms and legs, in severe cases involving the head and chest as far as the epigastrium, and perhaps from above the knees to the ankles; leaving sensation in the feet and in the bathing drawers area, and perhaps occasional patches of sensation in the hands. I shall refer to this anæsthesia again presently. The next characteristic symptom is the disorder of perception. Patients suffer from *imperception* in various sense departments; they cannot recognise common objects when they see them. They are unable to recognise sounds; for example, the sounds with which I usually test patients are the tearing of paper behind their head and the sissing of a soda-water syphon. They cannot recognise the sounds. Often these patients are unable to read or to take in any complicated sentences expressed to them. Simple remarks like "Good morning" they can take in, but complex sentences, such as those telling them to do a series of things, they cannot understand. They do not know where they are, they do not recognise people, they suffer from illusions of recognition, and they are disorientated in time, as well as in space; and their memory is defective. In other words they are completely confused. A special disorder of perception is apraxia of various kinds, that is to say, the patients are unable to form the idea of simple movements, such as buttoning the boots; and they suffer from catalepsy and catatonia, which I am disposed to regard as forms of apraxia. All these symptoms cause disorders of conduct, which for my present thesis do not matter. The patients always suffer from hallucinations, and these are constant. There are hallucinations of vision and of hearing, as well as of other sense departments.

Having defined the disease, no doubt you will remember very many cases of the kind which have come under your notice. I will now refer to a theory which I propounded some years ago here with regard to the hallucinations. I then pointed out that there were a positive and a negative side to hallucination; for example, taking a hallucination of vision, the patient sees a face or whatever it may be, but he does *not* see the objects

in the neighbourhood of the face—that is to say, there is a positive and a negative factor of the hallucination. I then went on to show that the negative factor was indicative of dissociation of the central nervous system from the periphery, that the peripheral neurons were dissociated from the central nervous system and that there was disordered associational activity. The point I make now is that the peripheral neurons are dissociated from the central nervous system, and the presumption is that the dissociation can only occur at the synapses. We now see more clearly that dissociation must occur at the synapses, and that there is increased synaptic resistance throughout the whole of the nervous system. This theory is supported by the presence of the anæsthesia, on which I have made the following observations: Taking an anæsthetic arm, the patient cannot feel a pin-prick in the affected area. It occurred to me that the anæsthesia was due to increased resistance at the synapses, and accordingly I adopted an expedient which Dr. Sherrington used in his investigation of the scratch reflex in the dog, namely, giving more than one stimulus in a given area. If you take an insensitive patch somewhere near the margin of the anæsthetic area—for example, if the patient be anæsthetic up to the elbow and you stimulate the middle of the forearm—you can pinch up the skin and put a pin through it, and yet there is no response. If you take a pin and persistently stimulate a square inch the patient begins to feel the stimulus. One can overcome the resistance in this way.

Further, I cut a disc of blotting paper, take four drawing pins and put them close together through the middle of it, then gum another disc over the top, so that there is a big drawing pin with four points to it. If in an anæsthetic area, provided you do not go too close to the periphery, you use this quadruple point and press it into a part of the skin where the patient cannot feel a single point, the patient feels it immediately, showing that the quadruple point will overcome the resistance, while a single point will not. The conclusion from this is that the resistance is at the synapses, and that it is not in the cell bodies, because if there is a block in the neuron there is no evidence to show that a strong stimulus will overcome the block more than a weak one. But if the resistance is increased at the synapses, a strong impulse will overcome the resistance, while a weak one will not.

Now, it occurred to me to try the effect of some drug which would diminish the resistance at the synapses in these cases. There is one drug which stands pre-eminent for such a purpose, *viz.*, strychnine. One has to try moderate cases of the kind—patients who suffer from some visual hallucinations, and who are able to tell you something of what the results are. You can take a hypodermic needle and inject the strychnine into the anæsthetic area. I will give you the case of a patient I have in mind who was anæsthetic to the shoulders, and had a patch of anæsthesia below the knees. At the first dose of strychnine, which was  $\text{miv}$  of the solution hypodermically, the patient could not feel the prick of the needle. She was suffering from hallucinations of vision and of hearing. At the next injection, four hours later, the patient could feel the prick of the needle, and all the anæsthesia had disappeared to the fingers, the whole body being sensitive. The patient was clearer in her mentation, and the hallucinations had more or less diminished. By the time the third hypodermic injection was used the hallucinations had entirely disappeared and in this case the patient went to sleep. I have repeated this experiment in about a dozen cases now, and find that the strychnine invariably has this result of diminishing the loss of sensation and diminishing the hallucinations. The effect was so definite that I used it as a routine treatment for patients suffering from hallucinations of this kind, but not cases of hallucinations of dementia præcox, or acute mania, for in those cases it would increase the hallucinations. In the exhaustion and toxic psychoses the injection of strychnine diminishes the hallucinations. One can give it by the mouth, but the result by this method is not so good.

As a result of these observations I conclude that the symptoms of acute confusional insanity are due to an increased resistance at the synapses of the nervous system, and that the chief incidence of the mischief is at the synapses.

#### DISCUSSION,

At the Quarterly Meeting in London, May 24th, 1910.

Dr. SEYMOUR TUKE asked how long the improvement lasted after the strychnine injections.

Dr. BEDFORD PIERCE said that all present must have felt very much indebted to Dr. Stoddart for his most suggestive paper. The only question he had to ask was as to why Dr. Stoddart inferred it was the synapses which were altered. He

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supposed there was no doubt whatever that strychnine quickened the reflex reaction, but he thought that, theoretically, that quickening might take place in a number of different parts of the reflex arc rather than at the synapses. Perhaps the nerve-cells might act more quickly, and his idea of the action of strychnine was that it stimulated nerve-cells rather than terminations of the nerves.

The PRESIDENT said he understood that it was only by a summation of stimuli that one judged whether there was a synaptic resistance. He thanked Dr. Stoddart for his very interesting and suggestive paper, which would remain in their minds as a definite contribution on obscure confusional insanities.

Dr. STODDART, in reply, said that there was definite improvement after the injections, but he did not recommend it as a treatment except when the hallucinations were such as to cause much mental disturbance. It was not intended as a cure. For such a purpose one had to improve the general health. He only brought forward the effect of strychnine as a support to his thesis. He had kept up the injections for two or three days, and they very much lessened the excitement. The point was that the anæsthesia was apparently due to increased resistance at the synapses, because it could be overcome by multiple stimuli of various kinds, whereas a block due to disease of the neuron itself could not be overcome, so far as was known, by having a multiple stimulus, or a stronger stimulus. He had previously come to the same conclusion from a study of the nature of hallucinations.

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*The Treatment of Melancholia by the Lactic Acid Bacillus.* (<sup>1</sup>) By J. GEORGE PORTER PHILLIPS, M.B., B.S. (Lond.), M.R.C.S., L.R.C.P., Assistant Physician, Bethlem Royal Hospital.

MELANCHOLIA, with its attendant constipation and faulty alimentation, lends itself at once to a dietetic form of treatment.

Whether the constipation is dependent on defective innervation and is a direct symptom of melancholia or is the initial cause of this mental disturbance, it matters not so far as our endeavours in treatment are concerned.

It is obvious that the melancholiac, in the acute stages of his illness, struggles against great odds owing to the following facts: His alimentation is defective, his excretions are diminished, and, moreover, his whole system is in a state of auto-intoxication. In other words there is a general clogging of the metabolic processes. The disturbance of the alimentary tract tends to form a vicious cycle hindering the nervous system from obtaining an efficient and pure food supply.

We have ample evidence of this impaired metabolism with its toxæmia. The patient has a sallow, muddy complexion, a dry skin, a parched, furred tongue, a high-tension pulse, brittle nails and lustreless hair, a scanty high-coloured urine

containing an excess of ethereal sulphates and fæces deficient in quantity and moisture and very offensive in odour.

Ranging from a mild attack of depression to a severe case of melancholia one finds the hub of the disturbance centring itself in the alimentary canal. For this auto-intoxication free purgation and administration of chemical antiseptics will afford relief but are not satisfactory.

An item of treatment which pre-eminently suggests itself is one which will not only inhibit the growth of the proteolytic organisms, the common cause of the abnormal putrefaction and consequent auto-intoxication, but will also obtain a biological intestinal antiseptics.

By the ingestion of vigorous cultures of the lactic acid bacillus under suitable conditions of diet one is able to produce this desired inhibition of these putrefactive processes. That this takes place is proved experimentally by the diminution of the daily urinary excretion of the ethereal sulphates and by alteration in the character and quantity of the stools. There is also a decrease in the number of the Gram-negative organisms and a great increase in the Gram-positive. This process of inhibition is probably due to the lactic acid formed in the intestine in a nascent state, this being dependent on the fact that the growth of putrefactive organisms which grow favourably in an alkaline medium is arrested by an acid-producing organism in a saccharine medium.

It is not my desire to write a monograph on the lactic acid organisms, but I think it is desirable cursorily to discuss the leading varieties.

An exact classification of the true lactic acid forming organisms has not met with any great degree of success. The soured milks used in Bulgaria, Egypt, Turkey and other eastern countries contain bacteria which are peculiar to themselves.

Kern, in 1881, described a milk-curdling organism which he isolated from the Russian Kefir, but this was found to be a spurious form of the lactic acid bacillus.

Rist and Khoury later investigated the Egyptian soured milk called Leben raib and described two kinds of organism—(1) *Bacillus lebenis*, (2) *Strepto-bacillus lebenis*. Grigoroff, working in Professor Massol's laboratory at Geneva, isolated, three years later, from the Bulgarian yohourth, two varieties of

the organism, and these he called "Bacillus A" and "Streptobacillus C." These appear to be identical with the two strains described by Rist and Khoury, the strepto-bacillus in each case forming a smaller percentage of the lactic acid than the long bacillus—*lebens* or A. In 1906, the bacillus A, or bacillus of Massol, was carefully described by Cohendy, who has done much work on the lactic acid organisms. Duggeli was the first to demonstrate the granule-staining in certain strains of lactic organisms. He obtained his cultures from the Armenian sour milk called Mazun.

The strain we have been using at Bethlem is the long bacillus of Massol, and we have noticed that this variety at certain times assumes the strepto-bacillary form, and occasionally shows this metachromatic staining with methylene blue.

From this observation I have formed an opinion that the two different varieties described are simply the result of a temporary deviation in the morphology of one organism. It is from  $2\ \mu$  to  $50\ \mu$  long and  $1\ \mu$  broad. It is non-motile and does not form spores. Viable bacilli are Gram-positive, whilst dead are Gram-negative. Cultivation is very difficult on ordinary media, and at most is feeble. It is both aerobic and anaerobic, and grows best at  $38^{\circ}\text{C.}$  to  $40^{\circ}\text{C.}$ , optimum temperature being  $45^{\circ}\text{C.}$ , and minimum about  $25^{\circ}\text{C.}$  On whey agar the colonies are circular, irregular, a greyish-white in colour and curled at edges. Gelatine is not liquefied and potato gives no growth. The lactic acid formed is either inactive or else lævo-rotary.

No peptonisation of the curd takes place. It is non-pathogenic, and may be given even to infants.

The following distinctive characters of the two varieties may be of use:

Type A (long bacillus): Stains homogeneously with methylene blue, 2.7 to 3.7 *per cent.* of lactic acid formed, and is inactive.

Type B (strepto-bacillus): Metachromatic granules with methylene blue, 1.2 to 1.6 *per cent.* of lactic formed, and is lævo-rotary.

It is important that a vigorous strain of bacillus should be obtained, as weakly ones are easily inhibited and tend to die out quickly.

Now as to the methods of preparing and administering

the bacilli, they may be administered (*a*) in *solid* form—tablets, powder, and gelatine whey; (*b*) in *liquid* form—bouillon of various kinds and curdled milk. The tablets and powder are quite unsatisfactory, owing to the small number of living organisms present in some brands and the total absence of living organisms in others. The lactic gelatine whey, when carefully and freshly prepared, is an admirable method of administration, especially to melancholiacs who refuse the milk or to other patients who are already well nourished, but there is no other special advantage in adopting its use.

In the liquid form we have various fluid media at our disposal: (*a*) milk, (*b*) lactose whey, (*c*) maltose whey, (*d*) malt extract solution.

In order to prepare the lactose and maltose whey one must proceed as follows: To each litre of milk add 1.5 c.c. of HCl and boil carefully for five minutes; in this way the casein will clot and separate. The whey may now be filtered through a piece of fine-mesh muslin. To each 100 c.c. of whey add two grammes of the sugar, maltose, or lactose. The most reliable sugars are those manufactured by Messrs. Kahlbaum.

Curdled or soured milk has now become so popular a panacea that the prescription has found a prominent place in the pharmacopœia of convention. Every dairyman has of late been initiated into the craft of bacteriology, and now claims to supply a pure sour milk, curdled by means of the real Bulgarian bacillus, the names of Professor Metchnikoff or Professor Massol being tacked on to assure the public that the organism employed is the one advocated and used by these pioneer scientists respectively. Many dairy companies manufacture and offer for sale a genuine and reliable sour milk, the whole process being carried out under scientific control. The chief objections to this source of supply are the expense, and, in outlying districts, the trouble entailed in obtaining a fresh daily supply.

For purposes of treatment of a number of hospital patients it is only necessary to obtain an incubator working at 37° (or a little higher), and a set of vessels for daily distribution. An ordinary-sized bacteriological incubator of Hearson's manufacture is sufficiently large for supplying curdled milk for twelve patients. Hearson's have a special form of incubator for this process, but the ordinary pattern suffices.



There are various kinds of bottles used for the distribution of the milk, but after practical experience of the different patterns I have found an Erlenmeyer flask of 300 c.c. capacity the most useful and serviceable. This holds about half a pint. The advantages are that, being made of thin glass, it is easily sterilised in a hot-air oven at high temperature without cracking, and the tapering neck with its moderately wide mouth lessens the chances of contamination, the aperture being readily plugged with cotton-wool.

The preparation of the curdled milk is quite simple, but good results are only obtained when a strict ritual is observed, the keynote being *efficient sterilisation*.

The milk to be perfectly sterile should be brought up to a temperature of  $120^{\circ}\text{C}$ . Not only is it difficult to obtain this temperature by ordinary means, but also it imparts an unpleasant flavour to the product. For ordinary purposes it is sufficient to bring the milk up to the boiling-point for five minutes, as by this method all organisms are destroyed with the exception of the spores of the *Bacillus subtilis* and the *Bacillus butyricus*.

The flasks, having been washed with warm water and soap, are drained, plugged with cotton-wool and sterilised at a temperature of  $140^{\circ}\text{C}$ . for twenty minutes in a hot-air steriliser. This procedure should be carried out on the daily return of the empty flasks from the wards. By having a duplicate set of flasks for each patient this method of cleansing and sterilisation can be adopted with ease and advantage. The cotton-wool plug is removed from each flask and the sterilised milk poured in, the plug being at once re-inserted. It only remains now for the cooling to take place and the inoculation to be made.

The most convenient way for perpetuating a healthy and vigorous culture of the bacillus is to keep a couple of sterile flasks specially for the stock cultivation of the organism. These are filled with sterile milk and inoculated with a few c.c. of the original or initial culture, purchased, or otherwise obtained from some reliable source. After incubating for twelve hours we have a stock culture, from which one is able to obtain a plentiful supply for inoculation purposes. Fresh stock cultures should be prepared every two or three days. Five to ten c.c.'s of this culture are taken up in a sterile pipette and ejected into each flask. The wool-plugged flasks are now

placed in the incubator for eight or ten hours, at the end of which the milk in a curdled state is ready for distribution to the wards.

A daily bacteriological examination should be made to investigate the growth and purity of the culture.

One meets with various difficulties in the process, and the following points are useful to be remembered: (1) Failure of the organism to grow. This may be due to the presence of antiseptics in the milk (this is likely only in summer), or to a weak or dead culture being used for purposes of inoculation. (2) Contamination. This may be due to careless sterilisation of milk or flasks. These sources of failure should be sought out and rectified, especially the latter, as pathogenic organisms, *e.g.*, streptococcus, staphylococcus, *Bacillus enteritidis sporogenes*, *Bacillus typhosus*, etc., may be present in a sample of milk. From this fact it is self-evident how important it is to sterilise the milk efficiently before putting it into an incubator, where under more favourable conditions multiplication of the harmful organisms takes place before the inhibiting effect of the lactic acid can be exerted.

Two flasks, each holding about half a pint of the preparation, are sent into the ward for each patient, one portion being taken at 11 a.m., and the other at 4 p.m., or, if preferred, at breakfast and supper, the milk being whipped up with a little cream and sugar. In this way the whole contents of each flask are used up at each separate meal, and there is no fear of contamination, as the flask is not used again until it has been washed, drained and sterilised.

During the treatment it is necessary to adopt a strict regimen. At the onset the patient is placed on—

*Diet A.*—Suppress all food with the exception of milk, malt extract and *sugar of milk solution*. After two days give in addition gruel, milk puddings, custard, bread-and-butter biscuits.

After three to seven days adopt—

*Diet B.*—*Avoid meat and all soups or gravy*. Give yolks of eggs, milk, cream, bread-and-butter, potatoes, milk puddings, fruit and vegetables. After one week allow fish every other day.

By this means the pabulum for the growth of proteolytic organisms is reduced to a minimum whilst that suitable for the multiplication and acclimatisation of the lactic acid bacillus

is increased. Although the lactic organism can be demonstrated in the fæces a few days after its regular administration, it takes at least a week or ten days before it becomes properly acclimatised. After acclimatisation it continues to thrive for twelve days longer without another dose being taken, and after that it tends to disappear.

During the early part of the treatment, in a few cases where the large intestine is in a state of atony, intestinal spasm may occur giving rise to colic. I have also noted headache, tinnitus, itching of the skin and nausea as unpleasant concomitants.

A somewhat marked feature in many of the cases noticeable at the end of the first week is the aggravation of the constipation. Some means has to be taken to combat it. Boiled vegetables and fruit greatly aid the regular evacuation of the bowels, and figs, prunes and boiled apples should be given freely in the dietary until the constipation lessens in severity. Some cases are so obstinate that medical treatment has to be resorted to; for these I have found the morning use of a glycerine enema or a nightly dose of treacle (1 or 2 tablespoonfuls) very efficacious. Even after a few days' treatment one is able to notice a difference in the appearance of the patient. The complexion is clearer and he wears a happier expression. The dry, furred tongue becomes moist and clean, and an increasing desire for food gradually appears.

As stated above, the constipation, although obstinate at first, tends to decrease. The fæces increase in quantity, become softer, and of regular consistency, and the offensive smell diminishes. Objectively with these changes the daily excretion of ethereal sulphates in the urine becomes less.

In order to check the quantity of fæces passed Schmidt's method should be adopted. This consists of separating off the stools of three days by means of a small meal of charcoal biscuits. In this way it has been found that a healthy person will pass during the three days a quantity of fæces which when dried will weigh 60 grm., whereas that passed by a habitually constipated person will not average more than 30 grm.

For the determination of the amount of ethereal sulphates excreted in the urine Salkowski's method is the best. The inorganic sulphates are precipitated by means of an alkaline solution of barium chloride. Barium sulphate is formed, which is filtered off, and the filtrate, after being acidified with HCl

is heated just up to boiling-point. This results in the decomposition of the ethereal sulphates, which immediately combine with the barium salts present in excess. The precipitate is now collected on a filter-paper of known weight, ignited and weighed.

Coincidentally with the amelioration of these symptoms a marked increase in the patient's weight takes place. Usually from about the fourth or fifth day the patient puts on weight steadily, and I have record of a case in which the weight increased at the rate of nine pounds in nine days. For the purpose of control I have had patients weighed in the usual way on admission, put on ordinary diet, and their weight and symptoms noted at intervals of a week. In the majority of these cases only a slight increase, and in others no alteration in weight was noted, and the symptoms were in no way ameliorated. After a few weeks, or in some instances much longer, the patient was put on the lactic acid bacillus treatment.

In all cases which subsequently proved to be the genuine forms of melancholia, and not depressed states of other mental conditions, a decrease of the symptoms and an increase of bodily weight ensued.

The increase of body-weight was registered weekly and the results placed on special weight-charts.

The *weekly increase* varied from 1 to 5 lb., and the *total increase* during the whole duration of illness ranged from 12 to 28 lb.

Up to the present we have been discussing chiefly the physical side of these cases. Now let us view the mental side of the picture.

As described above, the patients undergoing treatment gradually lost their depression and accompanying delusions, and the state of lethargy present in so many cases became one of activity, the rigidity of the large joints soon disappearing. The patients suffering from delusions without hallucinations were the most amenable to treatment. Those cases in which hallucinations appeared showed slower recovery. *Eighteen* male cases were treated; of these, two who are still on treatment are returned as improved, the final decision as to cure or otherwise being unable to be legitimately given. Of these eighteen cases eleven have *recovered*: two still on



treatment have *improved*; four un-cured (one of which proved subsequently to be a general paralytic); one died (agitated). In every case treated the body-weight increased considerably.

I wish here to acknowledge the valuable assistance which has been rendered me by Mr. Philip Crowe, our pathological assistant.

### CONCLUSIONS.

The lactic acid bacillus has a decided beneficial effect on cases of true melancholia with disturbance of the alimentary canal: (a) By diminishing the amount of toxins absorbed from the intestinal tract; (b) by promoting a rapid and easy assimilation of food material—a very important factor, as in the majority of cases the previous history shows there has been great decrease in body-weight. It certainly shortens the duration of illness and increases the chance of recovery. The percentage of recoveries is increased from 46 *per cent.* to 61 *per cent.*

From a careful study of numerous cases I am convinced that a large number of them could be mitigated by early treatment with the lactic acid bacillus.

Its value in correcting defective alimentation suggests that it might be used with great advantage in other mental conditions.

(<sup>1</sup>) A paper read at the Spring Meeting of the South-Eastern Division, held at Hanwell, on April 26th, 1910.

### BIBLIOGRAPHY.

- Benjamin White.—*Centralblatt für Bakteriologie*, Part 2, November, 1909.  
Stoddart.—*Mind and its Disorders*, 1908.  
Massol.—*Revue médicale de la Suisse Romande*, 1905.  
Cohendy.—*Comptes Rendus de la Société de Biologie*, 1906, vol. i.  
Schmidt.—*Examination of the Functions of the Intestine by means of a Test Diet*, Philadelphia, 1906.  
Macleod.—*Practical Physiology*, 1905.  
Herschell.—*Sour Milk and Pure Culture*, second edition, Glaiser, 1910.  
Combe.—*L'Auto-Intoxication Intestinale*, Lausanne.
-

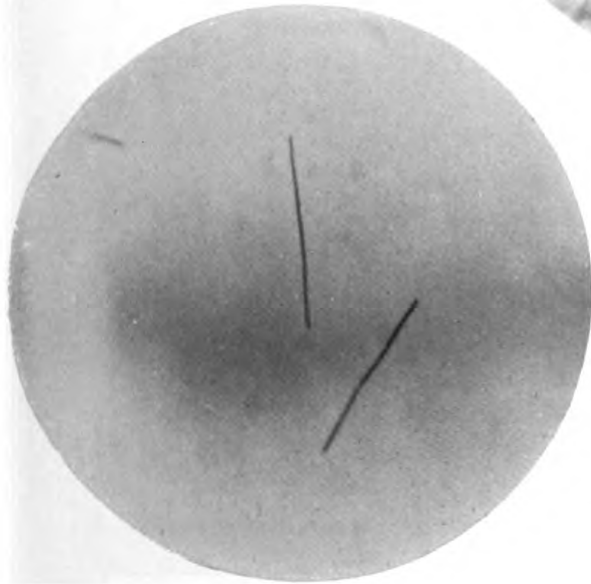


FIG. 1.—*Long bacillus of Massol*.  $\times 600$ .  
Stained by Gram's method.

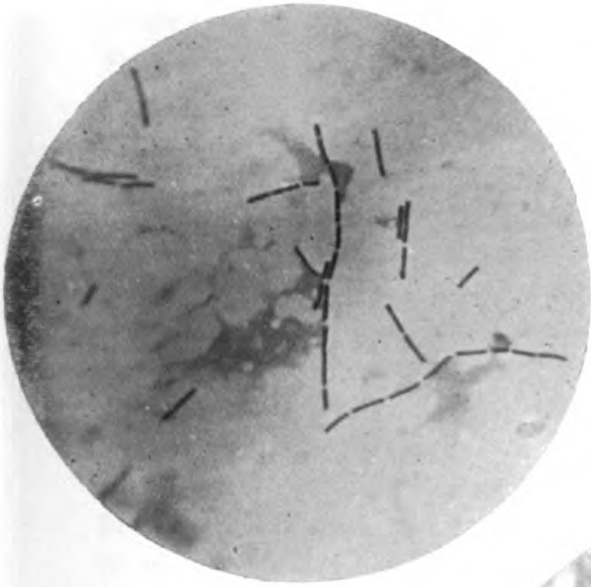


FIG. 2.—*Strepto-bacillus*.  $\times 600$ . Showing chain formation, and resembling *Bacillus anthracis*. Stained by Gram's method.

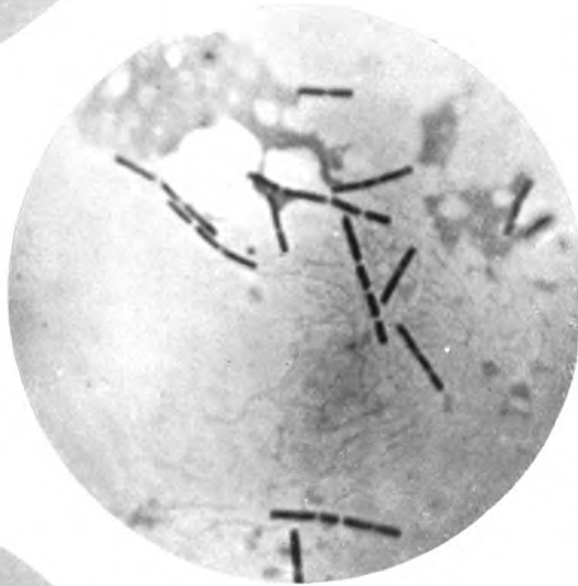


FIG. 3.—*Strepto-bacillus*.  $\times 1000$ . Stained with methylene blue, which makes organism appear thicker.

To illustrate Mr. J. George Porter Phillips's paper.



*The Psychology of Freud and his School.\** By BERNARD HART, M.B., Assistant Medical Officer, Long Grove Asylum, Epsom; Lecturer in Mental Diseases, University College Hospital.

THE present paper endeavours to describe, in a short and summary form, the principal tenets of the school of psychology founded by Professor Freud, of Vienna.

The task is one of very considerable difficulty. Freud's researches, originally confined to the phenomena of hysteria have spread and ramified in all directions—every department of psychology, psychiatry, æsthetics, mythology and folklore, have been successively invaded. Any attempt to reduce even the broad outlines of all this mass of material into the limits of a short paper seems foredoomed to failure. Secondly, although Freud has extended his work into the sphere of normal psychology, yet he approaches his subject from the standpoint of the abnormal. It is possible, therefore, that theories which are satisfying enough to the psychiatrist may appear forced and incomprehensible to psychologists more accustomed to the sane than the insane. I must hence crave your indulgence for those portions of my paper which seem confused and unconvincing—and I trust that you will ascribe the blame rather to the difficulty of presentation than to the subject itself.

It is obvious that an article of this length cannot hope to be more than descriptive. No attempt whatever will be made to demonstrate the accuracy of Freud's observations, nor to justify the theories which have been built upon them. My purpose is merely to set forth the general principles of Freud's teaching, with sufficient illustrations to make the meaning of those principles clear. The illustrations will be taken as far as possible from normal life, but it must be remembered that the conceptions we shall describe owe their origin, and much of their force and utility, to the facts of abnormal psychology.

There are two methods by which it is possible to carry out the task before us. Freud's psychology may be described along the lines of its historical development, pointing out in order the facts which were originally observed, the theories

\* Read before the British Psychological Society, at Oxford, May 7th, 1910.



which were designed to explain them, and the gradual alteration and growth which those theories have undergone as a result of subsequent research and experience. On the other hand, we may take Freud's views in their most recent and completed form, analyse the fundamental conceptions upon which they are based, and consider the utility which they now possess as weapons of explanation and therapeutics.

The second course is the only one which can be carried out satisfactorily in a short paper, and we shall therefore adopt it. Nevertheless, a few preliminary words concerning Freud's historical development will no doubt be of some interest.

Freud was a pupil of Charcot, and therefore early became acquainted with the French school of psychology. The keynotes of that school, culminating in the work of Janet, were its insistence upon the psychological method in the investigation of the psycho-neuroses, and its development of the conception of dissociation. These essential first principles were taken over by Freud, and for some time his researches and those of Janet could be regarded as two parallel lines of advance. Later, however, though much remained in common, they tended to diverge—and at the present day they represent two clearly differentiated schools of thought.

The starting-point of Freud's psychological career may be said to have been the moment when he became acquainted with certain observations made by Dr. Breuer on a case of hysteria, and with certain tentative theories which Breuer proposed as a result of those observations. Realising that the theories were capable of a great development, Freud became associated with Breuer in the investigation of other cases along similar lines, and their combined work led finally to the publication of the well-known *Studien über Hysterie* in 1895. Subsequently the partnership was dissolved, and Freud continued his researches alone. These were at first confined to hysteria and the allied psychoneuroses, but he was soon led to extend them into wider fields. Owing to the fact that during psycho-analysis, a process we shall subsequently describe, Freud's patients constantly related dreams they had experienced, his attention was early directed to these phenomena. He made them the subject of a detailed study, the results of which were ultimately produced in the *Traumdeutung*, published in 1900. Certain general theories concerning the rôle

played by sex in the genesis of mental abnormalities were published in the *Drei Abhandlungen zur Sexualtheorie* in 1905. Various other works, such as *Der Witz*, *Psychopathologie des Alltagslebens*, etc., contain extensions of Freud's method of research into departments of normal psychology. Freud's followers have developed his work in many directions. The best known of these followers, Dr. Jung of Zürich, claims to have confirmed Freud's fundamental views by the methods of experimental psychology, mainly by the use of association experiments.

These somewhat scrappy remarks must suffice so far as historical development is concerned, and we must now turn to the detailed consideration of Freud's theory and practice as they stand to-day.

The structure of Freud's work may be regarded as composed of—(1) the observation of certain facts, (2) the construction of concepts designed to explain those facts. The facts observed were primarily the psychological phenomena occurring in hysteria and the so-called obsession neuroses; secondly, the phenomena of the more pronounced psychoses constituting the insanities; thirdly, certain facts of normal life bearing a more or less close resemblance to those found in the abnormal cases. It is not possible here to do more than enumerate a few examples of the phenomena included under these headings. Thus we have the various dissociations of consciousness which the French school have demonstrated in hysteria—anæsthesias, paralyses, convulsions, somnambulisms, multiple personalities, etc. Then the symptoms characterising the insanities proper—hallucinations, delusions, incoherent speech, etc. And in normal life—dreams, and a number of other phenomena obviously to be regarded as minor grades of the disturbances found in the hysterical and the insane.

Freud strove to achieve a comprehensive explanation of these facts by the construction of certain theories. The essential basis of these theories was the conception of the "unconscious," and a clear idea of what Freud means by the unconscious is a necessary preliminary to any adequate grasp of his psychology. Freud's conception has been frequently misunderstood, and assailed upon altogether unjustifiable grounds. It has been confused with the subconscious of Janet and the French school—and the failure to appreciate its conceptual character

has led to the production of a great deal of nonsense, masquerading in the guise of criticism.

The conception of the unconscious arises from the adoption of a purely psychological method in the investigation of psychical facts. It is assumed that phenomenal consciousness, comprising everything of which we have immediate experience, constitutes but a small part of the total psychical universe. The part which remains is the unconscious. So far there can be no disagreement, except, perhaps, with regard to the terminology employed. The next assumption is that all the non-conscious portion can be treated psychologically, that is to say, it can be conceived as a play of psychical elements subject to psychological laws. The processes occurring in the unconscious are further conceived as exerting a causal action upon the flow of phenomenal consciousness. Here, of course, is the crux of the matter. According to the physiologically minded, when we leave phenomenal consciousness we leave psychology, and the unconscious is only to be conceived as brain-traces, brain-dispositions, and so forth. Freud claims, however, that it is possible to attempt the explanation of phenomenal consciousness not only by conceptions couched in the terms of physiology, but also by conceptions couched in the terms of psychology. The psychological conceptions constructed with this aim are what Freud means by the unconscious.

The factors which determine the course of phenomenal consciousness are conceived to be certain psychical systems, generally referred to as "complexes." A complex is built up of three elements, or better, it presents three aspects: (1) Intellectual elements, (2) the emotional or affective tone appertaining to these elements, (3) certain definite conative tendencies. These last two elements form the characteristic properties of the complex, and provide, as it were, the thread on which the individual parts are strung. They belong, in fact, to the complex as a whole, and it is only in virtue of these constituents that we can speak of the complex as a unit.

A simple example will make it clear that, in spite of all this ponderous language, we are so far treading on very ordinary ground: When a party politician is called upon to consider a new measure, his verdict is largely determined by certain constant systems of ideas and trends of thought. In Freud's terminology we should describe this fact by saying that the

politician's view on the measure in question is determined by his "political complex." The complex causes him to take up an attitude towards the proposed policy which is quite independent of any absolute merits that the latter may possess. A Liberal measure is obvious justice to a Liberal, obvious injustice to a Conservative. If we argue with our politician we shall find that the complex will re-enforce in his mind those arguments which support the view of his party, while it will infallibly prevent him seeing the arguments propounded by the opposite side. The complex with its pronounced emotional tone is, in fact, a far more potent agent in determining the direction of his thoughts than the cold claims of logic. Now it should be observed that the subject is probably perfectly unaware of this mechanism within himself—he fondly imagines that his opinion is determined solely by the logical pros and cons of the measure put before him. In other words the individual is himself ignorant of the forces actually deciding the flow of his consciousness. In the language of everyday life we should say that the politician was unconsciously biased. In the language of Freud we should say that the direction of his thinking was the result of an unconscious complex.\*

This example will, I think, show what is meant by a complex, and the type of action it exerts in a normal mind. There is nothing new in the conception itself—it has much in common with James's "selfs" (1) and with Shand and McDougall's "sentiments." Shand (2) defines a "sentiment" as "an organised system of emotional tendencies centred about some object." Complexes, then, are the forces which determine the behaviour of the conscious stream; we do so and so because we are dominated by such and such complexes. They may be regarded, in fact, as the psychological analogue of the conception of "forces" in Physics. It is needless to point out that a

\* The above description of the unconscious has been greatly simplified for the sake of clearness—perhaps to an undue extent. In the final chapter of *Die Traumdeutung*, in which Freud discusses the general principles underlying his conceptions, the psychical field is divided into the *Bewusstsein*, *Vorbewusste*, and *Unbewusste*. The *Bewusstsein* corresponds to what is, in this paper, described as "phenomenal consciousness." The *Vorbewusste* comprises the various mental elements which, although not at the moment in the *Bewusstsein*, can be brought there without any resistance on the part of the *Zensur*. The *Unbewusste* comprises the mental elements which cannot be so brought into phenomenal consciousness, on account of the resistance offered by the *Zensur*. From the point of view adopted in this paper there is no intrinsic difference between the *Vorbewusste* and the *Unbewusste*, and both have been therefore included in the unconscious.



complex is not a phenomenal constituent of the mind: we cannot speak of complexes in the sense in which we may speak of sensations and perceptions; they are not things which we ever actually experience. On the contrary, we invent the complexes in order to explain our experience. In other words, they are purely conceptual in character, and belong to the same category as atoms and ether waves. As McDougall (3) says of his "sentiments," "such a system of emotional tendencies is not a fact or mode of experience, but is a feature of the complexly organised structure of the mind which underlies all our mental activity."

Freud conceives complexes as having a permanent existence in the mind, corresponding to the brain-trace of the physiologist. They are not, of course, constantly active, but only become so under certain conditions. They may be said, in fact, to possess both kinetic and potential energy. A complex only becomes active when it is "stimulated" in some way. This stimulation occurs whenever one or more of the ideas belonging to the complex is roused to activity, either by some external event, or by processes of association occurring within the mind itself. Thus in the simple example we have taken, the "political complex" might be stimulated by a conversation in which some political subject was introduced, or by a chain of associations leading from some indifferent idea to an idea definitely belonging to the political sphere. So soon as this necessary stimulation has occurred, the complex immediately tends to exert its effect upon phenomenal consciousness. The effect consists normally in the introduction into consciousness of the various constituent ideas, emotions and conative trends belonging to the complex. Of the ideas, arguments, etc., presented to the individual, those which are in harmony with the complex are re-enforced, whereas those not so in harmony tend to be inhibited and to lose their force.

The mode of thought produced in this manner by the activity of a complex is quite different from that occurring in genuine logical thinking. In the latter case each step is the logical consequence of the preceding steps, evidence is impartially weighed, and the probability of various solutions is dispassionately considered. Such genuine logical thinking is in real life extraordinarily rare—in most cases a "complex bias" is only too obvious. Even in the world of science,

generally regarded by the ignorant as the peculiar sphere of dispassionate and cold thought, complexes play a vast part. The discussions of any learned society provide most instructive material in this respect.

The effects of a complex are in direct proportion to the intensity of its affective tone. When this intensity is very high the complex makes its influence felt almost constantly upon the flow of thought and action. Consider, for example, the immensely powerful complex formed in the young man who has recently fallen in love. Ideas belonging to the complex incessantly emerge into consciousness, the slightest associative connections sufficing to arouse them. All his mental energy is absorbed in weaving trains of thought centred about the beloved one, or, as it has been expressed, in "dressing the complex," and he cannot divert his mind to the business of the day. Every event which happens is brought into relation with his passion, and the whole universe is for him nothing but a setting for his dominating complex.

The effects of complexes upon the flow of thought have been experimentally demonstrated by Jung in his well-known work on associations (4). He found that in the ordinary association experiment the reaction obtained varied considerably according as the stimulus word had or had not aroused a complex into activity. The reactions characteristic of the activity of a complex were increase of the reaction-time, various peculiarities in the reaction word, failure to reply with the same word on repetition of the experiment, and alterations in the electrical resistance of the body as evidenced by a galvanometer. The following example illustrates some of these points (5).

Stimulus word.		Reaction word.		Reaction time.
(1) Head	. .	Hair	. .	1'4
(2) Green	. .	Meadow	. .	1'6
(3) <i>Water</i>	. .	<i>Deep</i>	. .	5'0
(4) Stick	. .	Knife	. .	1'6
(5) Long	. .	Table	. .	1'2
(6) <i>Ship</i>	. .	<i>Sink</i>	. .	3'4
(7) Ask	. .	Answer	. .	1'6
(8) Wool	. .	Knit	. .	1'6
(9) Spiteful	. .	Friendly	. .	1'4
(10) <i>Lake</i>	. .	<i>Water</i>	. .	4'0

LVI.

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Stimulus word.		Reaction word.		Reaction time.
(11) Sick	. .	Well	. .	1·8
(12) Ink	. .	Black	. .	1·2
(13) <i>Swim</i>	. .	<i>Can swim</i>	. .	3·8

The patient from whom this series was obtained had, during a recent attack of depression, determined to commit suicide by drowning. This complex has manifested itself in the associations which are italicised. (3), (6), (10), and (13) are instances of increased reaction-time; (13) shows also a peculiarity in the reaction-word itself.

As a result of his researches, Jung maintained that by means of the association experiment it was possible to obtain information concerning the principal complexes in the mind of a given subject. This method is, as a matter of fact, now generally adopted by Freud's followers as a preliminary to a detailed psycho-analysis.

I hope that sufficient has now been said to indicate what is meant by the conception of complexes, and the part which they play in normal life. We must now examine how far their functions become modified under abnormal conditions, and the manner in which they produce the symptoms of the psychoneuroses and insanities. As a preliminary measure it will be necessary to describe two further conceptions of Freud—"repression" and "censure."

Suppose that a complex is for some reason out of harmony with the remainder of the personality. This may be because its emotional tone or conative trends are opposed to those of the personality as a whole, or perhaps because they are incompatible with reality. In this case the personality may endeavour to rid itself of the complex as of a foreign body, to throw the complex out of action, and as far as possible to banish it from the mind and forget its very existence. This is the process of "repression." In its minor degrees repression is common enough in everyday life; to find its more marked manifestations one must enter the sphere of the abnormal. It is generally seen whenever some emotional event of an intensely painful nature has occurred. Under such circumstances the individual will endeavour to repress the offending complex—or, more simply expressed, to put it out of his mind. Such a mechanism would probably occur in the case of our young man in love, should his suit be unsuccessful. He would be

generally recommended to "forget his disappointment," "to think of something else," "to do so and so with a view to distracting his mind from the painful thoughts." All these phrases, translated into the language of Freud, mean that he would endeavour to repress the painful complex.

The effect of repression is to prevent the complex exerting its normal action upon the flow of consciousness, that is to say, the complex can no longer cause its constituent ideas to emerge without resistance into consciousness, and it can no longer cause the flow of thought and action to proceed in the direction of its own conative trends. Repression means, therefore, that a certain resistance is opposed to the complex which prevents the latter affecting consciousness in its normal manner. To this resistance Freud has given the name of "censure" (*Zensur*).

In spite of repression and the censure, however, the complex preserves an autonomous existence, and continues to influence the flow of phenomenal consciousness, but the influence is now distorted and indirect. The character of this distorted influence is dependent upon many factors—the intensity of the complex, the degree of repression, the power of the censure, and those unknown forces vaguely termed "constitutional predispositions."

Under certain circumstances the resistance offered by the censure may be sufficiently great to produce the complete dissociation or splitting of consciousness found in hysteria. As an example of this mechanism we may cite the case of Prof. Janet's patient Irène (6). Irène had nursed her mother through a prolonged illness culminating in death. The circumstances connected with the death were peculiarly painful, and the event produced a profound shock upon Irène's mind. A definite hysterical condition developed, characterised by frequent prolonged somnambulisms. During the somnambulisms she lived over again the scene of her mother's death, carrying out every detail with all the power of an accomplished actress. While this drama was in progress she was perfectly unconscious of the actual events happening in her environment, heard nothing that was said to her, and saw nothing but the imaginary scene in which she was living at the moment. Suddenly the somnambulism would cease, and Irène would return to her former occupation, absolutely unaware of the fact



that it had ever been interrupted. If she were then interrogated it would be found that in the apparently normal intervals she had not only entirely forgotten everything which had happened during the somnambulism, but that the whole system of ideas connected with her mother's death had completely disappeared from her mind. She remembered nothing of the illness or its tragic end, discussed her mother without emotion, and was reproached by her relatives for her callous indifference to the whole subject. Translating all this into the language of Freud, we should say that the system of ideas connected with the mother's illness and death formed a complex of excessively painful emotional tone. It was therefore altogether repressed, and the censure prevented its making any entrance into consciousness along the ordinary channels. Hence her complete loss of memory for all the events in question. The complex nevertheless preserved an autonomous existence, and at intervals the censure was broken down and the complex burst into consciousness, leading to the production of the somnambulisms we have described. The censure ensured, however, that the painful complex should remain dissociated from the personality, and its appearance upon the stage could only be accomplished by the temporary annihilation of the normal waking consciousness.

In this case the censure, during the periods intervening between the somnambulisms, altogether prevents the complex coming to the surface of consciousness. But a quantity of the available psychical energy, if one may employ this somewhat metaphorical expression, is used up in achieving the repression. Hence the amount at the disposal of the personality is lessened, and we have those persistent hysterical symptoms generally grouped under the names of *aboulia* and *abaissement du niveau mentale*—listless indifference, an inability to carry out any continuous train of thought or action, and a lack of all efficient reaction upon reality.

The same mechanism, though in a higher degree, is to be found in cases of multiple personality. Morton-Prince's famous "Miss Beauchamp" (7) may be cited as an illustration, especially with reference to the group of conative trends forming the delightful personality of Sally.

In other cases of repression, the censure, although preventing the complex from manifesting itself normally, allows it to

influence phenomenal consciousness, provided that the effect is so distorted that its real significance is concealed from the personality. Thus, in the case of Lucy R—, described by Freud in 1895 (8), the patient was constantly troubled by a subjective sensation of smell, together with various aboulie symptoms of the kind we have already mentioned. She stated that the smell sensation resembled the odour of burning pastry. Analysis revealed that, two months previously, an important event had occurred, connected with a complex of great emotional force. At the moment when this episode happened, some pastry then being cooked was neglected and became burnt. The complex in question was subsequently, after a severe mental conflict, repressed, and apparently disappeared from the patient's mind. It manifested its continued existence, however, by the constant presence in phenomenal consciousness of an element only connected with the real traumatic ideas by a chance contiguity—the subjective sensation of smell.

In many cases the symptom appearing in consciousness has a symbolical relation to the content of the repressed complex. Examples of this mechanism in minor degrees are frequently met with in everyday life, especially in connection with the sex complexes, which are subject in every individual to a considerable degree of repression by the education and conventions of society. Thus the well-known enthusiasm which certain elderly unmarried women devote to the keeping of dogs and cats, and their intense interest in births, marriages, and scandals—these are all explainable as symbolic effects of a sex complex whose normal manifestation has been repressed.

Or, again, the repression of a complex may be evidenced by the presence in phenomenal consciousness of directly opposite ideas in an abnormally intense form. The offending complex is thereby, of course, efficiently concealed. This mechanism is likewise common enough in normal life. Thus, an acquaintance of mine had, in his early youth, an intense desire to go to a public school and subsequently to enter the Army. Both these ambitions were frustrated, and now my friend has a bitter dislike for the public school system and a sovereign contempt for the Army. He is not even aware that his views on these subjects were ever different from those he holds now, or, rather, it is an unpleasant fact which he will not acknowledge to himself. Similarly the repressed sex complex frequently manifests itself

by an abnormal prudery—witness once more certain elderly unmarried women. In general we may say that whenever we encounter an intense prejudice we should at once suspect the existence of the opposite complex in a repressed form. Turning now to the definitely abnormal cases, it will be found that this mechanism is at the bottom of many obsessional symptoms. An obsession, of course, is an idea or action which haunts the individual in spite of all his efforts to rid himself of the incubus, although he may be perfectly aware of its absurdity and lack of all logical justification. Thus a patient may be obsessed with the idea that he is about to die, or that he will injure someone peculiarly dear to him; or, again, he may have an irresistible impulse to perform some action, to touch every lamp-post, or to carry out some complicated ceremonial before embarking upon the simplest business of the day. In all these cases we have an idea in consciousness which is, as it were, overweighted, and the explanation is usually to be found in a mechanism similar to that we have just described. The obsession represents, often in a symbolic form, the opposite of some complex whose presence is a constant offence to the personality.\* One often finds, for example, obsessions such as “washing mania,” an irresistible desire to wash the hands at every moment of the day, when some morally objectionable, but unconquerable, habit is present which arouses constant remorse in the mind of the patient.

Certain hallucinations may be similarly explained as distorted manifestations of a repressed complex. Thus a patient is tormented by “voices,” which reproach him with various crimes he has not committed. The crimes in question, however, bear a symbolical relation to portions of his past, formerly the occasion of an intense remorse. Such cases may be regarded as literal examples of the “small voice of conscience,” distorted by repression.

While we are engaged upon these questions of repression and the censure it will, perhaps, be of interest to say a few words concerning Freud's theory of dreams, which has played such an important part in the development of his psychology. According to Freud dreams are the expression—generally in symbolic

\* Here, again, Freud's view has been described in a somewhat unduly simplified form. Strictly speaking, the obsession is an idea in consciousness to which the affect properly belonging to a repressed idea has become attached—the conscious idea is not necessarily the *opposite* of the one which is repressed.

form—of complexes which are subject to a more or less degree of repression. During the waking state the censure is sufficiently strong to prevent these complexes effecting an entry into consciousness, but during sleep the resistance is so weakened that the complex is enabled to manifest itself. The censure, however, preserves enough power to ensure that the complex can only make its appearance in a distorted and symbolic form. A simple example from my own experience will perhaps make the meaning of this rough statement clear. A colleague who occupies a post senior to me upon the staff of Long Grove Asylum recently applied for an appointment at another institution. His success would have meant my promotion—but he happens to be one of my greatest friends, and I should certainly resent the suggestion that his departure could occasion me anything but genuine sorrow. Nevertheless I dreamt this dream: He and I were endeavouring to write in an inconceivably small room. The space was so cramped that the movements of one constantly interfered with those of the other. A quarrel resulted, and I had the satisfaction of finally pushing my colleague and friend outside the door. In other words the complex whose existence I would not acknowledge in the waking state managed to express itself in a symbolical form during sleep.

The distortion effected by the censure is often, however, far greater than in this very transparent instance, and the task of interpreting the dream then becomes one of extreme complication and difficulty. A character figuring in the dream may be a "condensation," as it is termed, of two or more real individuals—that is to say, the dream character combines in himself attributes belonging to several quite distinct persons. Or again, two or more complexes may combine in their action, so that the dream drama symbolises two or more independent trends of thought. As Freud would say, the individual elements of the dream are "constellated" by a multiplicity of complexes.

Space does not permit of our entering further into this subject, or of our offering any criticism of the vast structure which Freud has built up in this field. We may perhaps be allowed, however, to touch upon a misconception which has arisen from a certain inadequacy in Freud's terminology. He has laid down the axiom that every dream is to be regarded as the fulfilment, in a symbolic or distorted form, of some wish,



This statement has aroused considerable opposition, and it cannot be denied, I think, that the word "wish" is singularly unsatisfactory. It tends to arouse the notion of a definitely realised end, which the mind deliberately strives to achieve. So far as I understand him, Freud's meaning would be better expressed by the term "conative trend." We should then say that every dream permits the conative trend of some complex to manifest itself against the resistance of the censure. If Freud's general theory is admitted, and the significance of complexes has been clearly understood, the statement under consideration then becomes almost a truism.

In all those cases of repression of a complex which we have hitherto described, it will be seen that the process actually to be observed is a mental conflict. Two opposing or incompatible trends are simultaneously present, and the mind is, as it were, divided against itself. The conflict is solved, not by a fight to a finish, but by a process of compromise. One of the opposing trends is repressed, its existence is ignored by the personality as a whole. But the repression can be effected only at a certain cost. This cost is represented by the symptoms we have already described—obsessions, somnambulisms, aboulia, prejudices, and a multitude of other manifestations, comprising in their major forms the symptomatology of hysteria and other psychoses, and in their minor forms many of the anomalies of everyday life. It must be carefully observed that it is not the mere conflict which is morbid, but the method by which the conflict is assuaged—the compromise, and the injury to the efficiency of the individual which this compromise inevitably brings in its train.

In these emotional conflicts and their avoidance by processes of compromise formation, Freud sees the essential mechanism of the psycho-neuroses. In a paper which recently appeared in the *Sociological Review*, Mr. W. Trotter (9) has shown that a similar mechanism may be observed in the sphere of social psychology—a conflict between, on the one hand, the primary instincts of the individual and the facts of his experience, and on the other hand, the conventions of education and civilisation acting upon him by means of the "herd instinct." Between these two frequently incompatible factors every individual must find a compromise of one kind or another.

Returning to our main subject we must say a few words

concerning the methods of investigation and therapeutics employed by Freud in the analysis and treatment of the psycho-neuroses. These are based upon certain empirical facts discovered in the course of his researches. He found that if a repressed complex were brought to the light of day, so that the individual was forced to recognise its existence, and to face once more the conflict which he had previously avoided by the process of repression, then the complex was deprived of its morbid powers, and the symptoms of the psycho-neuroses disappeared. Such a procedure enables the individual to acquire an objective attitude towards the opposing trends in his mind, and the formation of compromises is stopped. In order to obtain this end Freud contrived his well-known method of "psycho-analysis." The aim of the method is the discovery of the various complexes underlying the symptoms in any given case. It will be remembered that, owing to the operation of the censure, the individual is himself ignorant of the real nature of the pathogenic complex. The latter can only manifest itself to consciousness in the various distorted forms we have previously mentioned. The problem was, therefore, to circumvent the censure in some way. Freud achieved this originally by the employment of hypnotism. By hypnotising the patient he succeeded in temporarily weakening the force of the censure, and unearthing the complexes of which he was in search. Later, however, he found hypnotism to be often inapplicable or ineffective, and he gradually replaced it by his present procedure of psycho-analysis. The patient is encouraged to unburden his mind fully to the physician. He is asked to relate every idea or memory which occurs to him, but to make no attempt to direct or control the flow of his thoughts (*Zwangslöses Assoziieren*). It is necessary that he should adopt an entirely non-critical attitude, recording everything which passes through his mind, however trifling or irrelevant it may seem to be. The ideas thus recorded will be almost all conditioned by the complex, and the more successfully the non-critical attitude is achieved, the more nearly will these ideas indicate the real nature of the complex. Various peculiarities in the character and mode of production of the images and memories described by the patient enable the physician to estimate their significance (*Deutungsverfahren*). By persisting in this procedure

the underlying complex will be finally unearthed with a rapidity varying directly with the skill and experience of the physician. Its nature and bearings are then fully explained to the patient.

It must be realised that the method of psycho-analysis and its claims to therapeutic efficiency rest almost altogether upon an empirical basis—its theoretical justification is by no means perfectly clear. Freud's primary assumption is, of course, that the actual consciousness of the moment is rigidly determined by the past, and in particular by the affective past, or rather by the forces in which this affective past is conceived to be now embodied, namely, the complexes. In his method of psycho-analysis he further assumes that this process may, as it were, be made to retrace its steps, to proceed in the reverse direction ; that, provided the censure be inhibited by the adoption of a non-critical attitude, it is possible to start from the morbid symptom and proceed along a chain of associations leading ever nearer to the pathogenic complex. The complex thus found is then assumed to have been the primary cause whose active functioning produced both the chain of associations and the morbid symptom itself. It is true, of course, that we are not called upon to imagine that during psycho-analysis links of a chain which actually led from the complex to the symptom are successively reproduced in inverse order, but merely that the two end terms, the complex and the symptom, will be identical in the two processes. Nevertheless, we cannot pretend that the theoretical aspect of psycho-analysis is entirely satisfactory, and we must reiterate our statement that at the present time it can only be justified empirically. Freud claims that the empirical justification is very strong. He asserts that the coherent picture of the whole disease process obtained at the end of an analysis, the discovery of a satisfying explanation for almost every symptom, and the power of profoundly influencing the course of the disease, are proofs of great cogency. Almost everyone who has taken the time and trouble to master Freud's technique—a task, by the way, of no mean difficulty—has confirmed his results in all their essential details. But, even if all this be admitted, there is still room for doubt. The initial method of non-critical associations might be reasonably established by proofs of this kind, but the *Deutungsverfahren* introduces a conveniently mobile factor which inevitably arouses some distrust.

Freud's methods have been carried by his followers into many fields. Perhaps the most important of these extensions has been the work of Dr. Jung in the sphere of the definite insanities. In his *Psychologie der Dementia Præcox*, published in 1907, Dr. Jung showed that in the large group of insanities included under the name of dementia præcox it was possible to trace psychological mechanisms identical with those demonstrated by Freud in the psychoneuroses. The emotional conflicts, the repression of complexes, and the development of compromise formations were all to be met with. He found, moreover, that the extraordinarily fantastic and apparently incomprehensible symptoms which make up the clinical picture of dementia præcox could all be regarded as exaggerations of the mechanisms which were known to play a part in the phenomena of normal life—more particularly, of course, the phenomena of dreams. We can make no attempt here to follow him into this field, but perhaps the description of a simple case will give an idea of the way in which these conceptions illuminate some of the problems of insanity. The case is taken from a paper of Dr. Jung's, entitled *Der Inhalt der Psychose* (10). A man of between thirty and forty years of age, of exceptional intelligence, and an archæologist of note, was brought to the asylum in a condition of acute maniacal excitement. He was of short stature, thin, and weakly, and he stuttered abominably. His history was as follows: He had been an intellectually precocious boy, and had early devoted himself to the study of archæology, finishing his education at the University of B—. At the conclusion of his university career he buried himself altogether in the pursuit of his science, cut himself off more and more from the world and from his friends, and finally led the life of a complete hermit. Some years later, while on a holiday tour, he returned to B—, where he spent most of his days in long walks among the outskirts of the town. After one of these excursions he complained of feeling nervous and restless. A state of excitement developed, passing rapidly into the acute delirium which led to his removal to the asylum. On admission he was intensely confused, had no idea where he was, and spoke only in short sentences which nobody understood. Periods of violent excitement were often present, during which he attacked all those about him, and could only be restrained



by the united efforts of several attendants. Gradually the delirium abated, and one day the patient suddenly awoke as if from a long dream. He rapidly returned to his normal condition and was discharged from the institution. He immediately resumed his former life, and in the following year produced several works of the first rank. His acquaintances only observed that he seemed more of a misanthrope and more of a hermit than ever. Then once again he came to B—, and again occupied his days in long walks. A fainting attack in the street was followed by an outbreak of delirium, and for the second time he was brought to the asylum. On this occasion, however, the symptoms were different from those noted during his former illness. He performed complicated gymnastics all over the room, spoke of his marvellous muscular power and bodily beauty, announced himself to be a great singer, and continually sang love ditties of his own composition. After a time the delirium lessened, he became more accessible, and it was possible for Dr. Jung to undertake an analysis of the case. The final result of his investigations was as follows : While the patient was a student in B— he fell in love with a certain lady, and they were in the habit of taking long walks in the neighbourhood of the town. The shyness and feeling of shame of the stutterer prevented him from declaring his passion, and, moreover, marriage was at that time a financial impossibility. At the end of his university career he left B—, and never again saw the lady. Shortly afterwards he heard that she had married somebody else. Then he buried himself in his hermit's life, and strove to forget ; in other words, the complex, painful through its incompatibility with reality, was repressed. Then came his journey to B—, and the first outbreak of delirium—the repressed complex burst on to the surface. He found himself in the chaos of a mighty dream ; great battles were in progress, and he was always in the centre of the fight, performing prodigies of valour and leading the armies with marvellous skill, while the lady watched and awaited him as the prize of victory. This was the period when he blindly attacked all those about him and struggled furiously with his attendants. Then came the final victory—the bride approached and he awoke once more to reality and the dull routine of his life. The complex was again repressed. It will be observed how closely the content of this delirium resembles the ordinary day-dreaming of the adolescent

—which is likewise, of course, a symbolised expression of the sex complex. The difference consists merely in a degree of dissociation which permits the complex to manifest itself in a definitely hallucinatory form, altogether cut loose from the control of the personality. In the second attack, which, like the first, was preceded by a visit to B—, the course of events was somewhat different. The complexes which then manifested themselves, although obviously closely allied to the sex complex, were rather those which had arisen as a result of his bodily infirmities. It will be remembered that he was stunted and unattractive, his muscles atrophied and weak, and that he stuttered abominably. He was entirely unmusical, his voice was harsh, and he was incapable of singing a note in tune. All this formed part of a complex of bodily shame, which we saw in action at the time he was courting his lady. Coupled with it, of course, was the intense secret desire that the defects could be removed. During the second attack of delirium this was the complex which emerged to the surface, with all its conative trends fictitiously fulfilled. He was immensely strong, and a gymnast of the first rank—hence the complicated antics he performed around the room. He was the greatest singer in the world, and a prodigious orator. He possessed, in fact, the corresponding virtue for every defect which reality had inflicted upon him. This type of hallucinatory fulfilment is extremely common, and is the mechanism producing the kings and queens to be found in every asylum. Freud has referred to it as a flight into the disease to obtain a refuge from reality.

The similarity between this case and the dreams of normal life will be obvious to everyone. The parallel may, indeed, extend much further. In the more advanced cases of dementia præcox we find all those mechanisms—condensations, symbolisms, distortions of speech, etc.—which Freud has demonstrated in the ordinary dream. As Jung expresses it: "Let the dreamer walk about, and act like one awakened, and we have the clinical picture of dementia præcox."

Those who have some acquaintance with Freud's work will be surprised that I have so far made no mention of his sex theories. The omission has been partly the result of want of space, but to some extent it has been deliberate. To the majority of Freud's critics the sex theories form the essence of his work, and it is these they have seized and rended. To me,

however, the sex theories are not the whole of Freud's work—they are not even its most important part. Freud's great contribution to science has been his demonstration of the mechanisms underlying so much of normal and abnormal life, and I hoped to emphasise this fact by deliberately neglecting his other aspect. I propose, however, to indicate roughly the relation which these two aspects bear to one another.

We have seen that the various mechanisms described were all regarded as the result of a mental conflict, the existence of simultaneous opposing trends in the mind—and as the methods by which the conflict was avoided. Now Freud found, as the result of experience, that the complexes which tended to be repressed were in most cases of a sexual nature. This is also what we should have expected *à priori*. The enormous power of the sex complexes, the equally powerful repressions imposed by education and all the conditions of civilisation—in these forces we have all the factors necessary for an intense mental conflict. Freud, however, has gone further than this purely empirical statement. In his endeavour to find wide-reaching generalisations he has constructed elaborate theories of the essential nature of the sex complexes, their biological development, and their ætiological significance in the causation of the various types of psychical abnormality. These theories have undoubtedly a great body of evidence in their favour. On the other hand, Freud has, during his long career, altered them to a considerable extent, and one cannot feel assured that a similar fate will not await them in the future. They are entitled to impartial consideration and to every investigation—but a sceptical attitude is, for the present, certainly justifiable. In any case, however, the sex theories and the mechanisms form two independent structures, which must be criticised and estimated altogether apart. The former may be regarded as still unproven; the latter have, I think, already justified themselves in many of their essential points.

Genuine criticism of Freud's work hardly exists—we are badly in need of it. That which has been attempted has generally foundered upon one of two rocks. Many critics have totally failed to realise that Freud's views deal largely with conceptual constructions. They have imagined that his complexes and unconscious mental processes were phenomena on the plane of sensations and perceptions, and have asked how

their existence can possibly be demonstrated. This is comparable to asking a Mendelian to produce his recessives and dominants for general inspection. It is surely obvious that Freud's conceptions can only be established or disproved by the process of applying them, and determining whether or not they suffice to explain the phenomena observed, and to predict the occurrence of future phenomena. Other critics—the majority—confuse the categories in the most lamentable manner. They attack Freud on the really astounding ground that his theories are ethically objectionable, that it would not be desirable for such things to be true, and that therefore they are not true. On the other hand, certain of Freud's followers are, perhaps, too enthusiastic, and tend to convert his school into something dangerously like a religious sect.

There can be no question that Freud's works contain some of the most valuable and stimulating contributions ever made to the progress of psychiatry. He has carried psychological determinism and the psychology of the *individual* to an extent never previously attempted. His demonstration of the fact that the flow of phenomenal consciousness is conditioned by psychological causes of whose existence the individual is altogether unaware—a fact known implicitly to every competent novelist and historian—opens up a fascinating vista for future research. We owe to Freud, again, the first clear formulation of the principle that mind can be treated as a phenomenon, capable of *psychological* explanation, and the first systematic attempt to construct a conceptual psychology—certainly a notable departure in the history of science. He has, moreover, established a firm basis for the oft-repeated phrase that the mental processes of the insane are only exaggerations of those found in the sane. Most important of all, he has shown the vast *rôle* which mental conflicts play in the psychology of both sane and insane.

On the other hand, some of Freud's work has been carried out by methods which do not altogether harmonise with the requirements of modern science. He has built up enormous structures upon bases which have not been adequately established, and formulated wide-reaching generalisations from a comparatively small number of facts. He may be said to have the genius rather of the poet than of the scientist. In all his books are ideas which astonish by the intensity of their illumination, and which inevitably arouse an answering thrill of



conviction. But when he attempts to demonstrate their validity, the facts often seem insufficient, and the deductions unconvincing.

The need of the moment is—not the enthusiasm of the disciple who builds the structure ever higher, not the indiscriminating attack of the *à priori* opponent—but the cold criticism of the impartial investigator, who will examine the foundations with every care, and estimate the justification with which each stone has been laid upon another.

## REFERENCES.

- (1) W. James.—*Principles of Psychology*, vol. i, p. 292.
- (2) A. F. Shand.—“Character and the Emotions,” *Mind*, N.S., vol. v
- (3) W. McDougall.—*Social Psychology*, p. 122.
- (4) C. G. Jung.—*Diagnostische Assocationsstudien*, Leipzig, 1906.
- (5) C. G. Jung and F. Peterson.—“Psychological Investigations with the Galvanometer and Pneumograph in Normal and Insane Patients,” *Brain*, July, 1907.
- (6) P. Janet.—*The Major Symptoms of Hysteria*, London, 1907, p. 27; “L’Amnésie et la Dissociation des Souvenirs par l’Émotion,” *Journal de Psychologie normale et pathologique*, 1904, p. 417.
- (7) Morton Prince.—*The Dissociation of a Personality*, New York, 1906.
- (8) Breuer and Freud.—*Studien über Hysterie*, Leipzig, 2nd edition, 1909, p. 90.
- (9) W. Trotter.—“Sociological Application of the Psychology of Herd Instinct,” *Sociological Review*, January, 1909.
- (10) C. G. Jung.—*Der Inhalt der Psychose*, Leipzig, 1908.

*On the Functions of the Optic Thalamus and the Corpus Striatum.*<sup>(1)</sup> By JAS. V. BLACHFORD, M.D., Medical Superintendent City and County Asylum, Bristol, and Clinical Lecturer on Insanity, University College, Bristol.

Suggestions have from time to time been made as to the probable functions of the basal ganglia, but so far none of them appear to have been very satisfactory.

It seems to be generally accepted that the optic thalami are not merely sensory centres for every or any special kind of sensation, but are large association ganglia, and it is the endeavour here to point out from anatomical, pathological, and

other reasons the kind of associations with which they are probably concerned, and the very important part they play in the life of all animals possessing them.

It may be objected that the conclusions arrived at are not in any way the result of experimental investigation, but when dealing with structures such as these, which in the higher animals are so deeply seated that considerable damage, or, at least, disturbance, must be caused to surrounding and very important nervous centres if they are operated upon; this method of inquiry seems to be not only useless, but often misleading, for by whatever method they may be extirpated, it is impossible to estimate the damage done to surrounding parts, and if the experiments consist of attempts at stimulation it is impossible to prevent the diffusion of the stimulant beyond the area under experiment, added to which in both cases we have to take into consideration the effect of the shock of the operation on the animal itself. In these circumstances, a better way of arriving at a correct conclusion as to the functions of such deeply seated and important nervous ganglia seems to be by reference to their development, their anatomical relations and the symptoms which are manifested when in disease of the central nervous system they appear to be chiefly affected, and by discussing how far this pathological condition interferes with that association of sensations which makes an intelligent appreciation of our surroundings possible.

First let us consider the developmental relations of the optic thalami. They are developed as thickenings of the postero-lateral aspects of the anterior cerebral vesicle. From the same vesicle we have the optic vesicle budding out giving rise to the optic tracts and retinae, and from its fore parts the buds which are destined to become the cerebral hemispheres.

We thus see that from the outset the parts which are about to develop into the optic thalami are very intimately associated with the cerebral hemispheres.

We next come to the consideration of their anatomical relations. To commence with, the optic tracts are to a great extent connected directly with them. The main fillet-fibres are said to end in the ventro-lateral or main sensory nucleus of Cajal; those of the central tract of the cerebral nerves,

and of the fifth, in the anterior semilunar nucleus, which is in close proximity to the main sensory nucleus. Axons from the corpus mamillare reach the anterior part of the thalamus through the bundle of Vicq d'Azyr, and so bring it into communication with the fornix and hippocampal region, and so probably with the osmatic centre. By the optic radiations of Gratiolet they are brought into direct communication with the cortical visual centre in the occipital lobe.

By their anterior peduncles they communicate with the fronto-parietal part of the cortex or sensori-motor area, and by their inferior peduncles with the temporal region, and so, no doubt, with the cortical centre of hearing. There are numerous other connections with various parts of the central nervous system, but for the present purpose it will be sufficient to enumerate these. In studying the connections of the thalamus, one curious and significant point arises, *viz.*, that, although it is intimately connected with the various parts of the cerebral cortex and with the corpus striatum, by both afferent and efferent fibres, those connecting it with the lower centres appear to be mainly, if not entirely afferent. In the section devoted to neurology in the last edition of *Quain's Anatomy* the following statement appears: "From the thalamic nuclei the afferent or sensory path is continued to most parts of the cerebral cortex by fibres which arise as axons of the thalamic cells. On the other hand, the thalamus receives fibres from cells of most parts of the cortex. How the nervous impulses, which descend along these fibres are continued to the lower centres is not certainly known."

As to the pathological symptoms the present discussion was suggested by a case which died in the Bristol Asylum some years ago and was the subject of a short paper. It was briefly as follows: "A man of middle age had been ailing for some three and a half months, the symptoms being very rapid loss of sight with oncoming dementia, the latter being out of all proportion to what one would expect from the loss of sight only, and the condition of dementia arrived at in a few weeks being far deeper than that occurring even in advanced general paralysis. At the same time, as far as could be ascertained (before this advanced condition was reached), there was no corresponding loss of sensation.

"On *post-mortem* examination no tumour or hæmorrhage could

be discovered, and there were no signs of general paralysis, but both the optic thalami and anterior corpora quadrigemina were mottled, and on section being made the cells were found to be degenerated." In this case there was a history of syphilis.

In the same paper two other cases were reported, each with a history of syphilis, with exactly similar symptoms, but in each there was a marked improvement upon the administration of pot. iod. in large doses, reaching as much as 3j three times a day.

I think we are justified in assuming that these two were similar in nature to the one which was *post-mortemed*, but that the treatment at any rate delayed the fatal result.

In looking up records of cases of lesion of the optic thalami (and these are few and far between), the chief symptom mentioned is invariably that of dementia.

Can we in any way explain the above symptoms, if, as it appears, we are dealing with a lesion of a basal ganglion and not one of the cortex?

Let us for a moment consider the nature of a simple perception: take that of a rough surface; such a surface to one who had vision only, but not the tactile sense, would mean nothing except that it differed in appearance from a smooth surface. Add the sense of touch, then, and whenever the surface is seen and felt at the same time, two distinct stimuli arrive at the central nervous system by different paths, —one by the optic tract, the other by the fillet. After a sufficient number of similar experiences, whenever one sensation occurs it gives rise to a faint sensation or idea of the other and *vice-versâ*. How is this brought about? There must be a common link somewhere, otherwise a faint sensation of the one would not follow a vivid sensation of the other.

We have seen before that the part which is centrally situated and most intimately connected with the cortical centres for these sensations is the optic thalamus. We have also seen that the most profound dementia occurs in lesions of that body.

Seeing that the two most relational senses are those of sight and touch, and that consequently anything which would interfere with their association would be most likely to bring about the symptom we are discussing, I think we may reasonably



infer that the association of the sensations of sight and touch occurs in the optic thalamus.

Take next the sense of hearing : if, whenever a rough surface is seen or touched, or both, the word "rough" is mentioned, then on this sound being again heard, although there is no surface to examine, the faint sensation of a rough surface, both in its appearance and feel, will occur to the individual, and will constitute the idea of roughness.

The optic thalamus has been shown to be in intimate connection with the cortical centre for hearing, so that in all probability it is the association medium between these three sensations.

What is the probable explanation of this. We must suppose that fibres from the optic tracts arborise round cells in the optic thalamus and anterior corpora quadrigemina bodies ; from these, axons pass to the occipital cortex and arborise round visual cells, giving rise to the sensation of sight. Thence other axons pass back to the optic thalamus to arborise round other cells there. In like manner axons arise from cells in the tactile cortex and pass to the optic thalamus, and there arborise round the same cells ; hence, whenever an object is seen and at the same time examined by the sense of touch, a certain kind of stimulus reaches these cells from the visual cortex, and is immediately followed by a certain kind of stimulus from the tactile cortex or *vice-versâ*, and when these changes have followed each other sufficiently frequently, upon the production of the one the other will invariably follow, though with less intensity.

The axons arising from the thalamic cells will convey the result of these changes to the corresponding cells in the cerebral cortex, where they will give rise to sensations constituting the perception of the object observed.

The same will apply to sounds which can in any way be associated with sight or touch.

If it be admitted that all our sensations are cortical—and this seems to be generally accepted—and that our perceptions are the result of the association of two or more sensations, then there must be some centre in which they are associated, and we have seen that from a developmental and anatomical point of view the optic thalamus appears to be most suitable. If we add to this the fact that in disease of this body we have

a very pronounced dementia, which might be easily accounted for by a loss of perceptive power, we have gone a great way towards localising these association functions in the optic thalamus. If this is so, the optic thalamus may be looked upon as the centre for that association of the primary sensations of sight, touch, and hearing, which, when registered on the cortex, gives rise to the perception of things around us.

Let us go a step further; these cortical cells, which represent the association cells in the optic thalamus, if stimulated from some other source, will give rise to similar sensations, as if the stimulus arrived from the optic thalamus itself; hence, when in trains of thought arising in other parts of the cortex they are affected, faint perceptions will arise in the mind, much like those which would have originated had the stimulus arrived from the optic thalamus, the only difference being that whereas a stimulus arising in the optic thalamus necessarily entails stimulation of the sensory cortex, from which the afferent fibres to the optic thalamus arise, and so a vivid impression as well; in this case the faint impression arises without any vivid impression, is therefore still more faint, and forms what may be termed an idea. This being so, the optic thalamus is indirectly responsible through its registered impressions in the cortex for our ideas of the primary attributes of things around us.

The senses of smell and taste have not been mentioned, as they are so unrelational, and so form very few associations, but in those cases in which associations are formed between these senses and those of sight or touch these probably take place in the optic thalamus, so that to summarise briefly the functions of the optic thalamus:

(1) It appears to be concerned directly in the sensation of sight, some of the cells, especially those in the pulvinar and lateral geniculate body, forming relay cells between the retinae and the cells in the visual cortex.

(2) It is the centre of association between sight and touch themselves, and between these senses and all others, including, perhaps, the muscular sense.

(3) Indirectly through its representative cells in the cortex, in which these associations are permanently registered, it makes possible those ideas of the qualities of things without which thought, as we know it, would be impossible.

Concerning the muscular sense, of which mention has been made, it is very difficult even to speculate, but in those associations in which it is concerned it seems possible that there is some other centre involved primarily, and that the optic thalamus plays a secondary part; and more than that, seeing how intimately it is associated with the internal capsule, with its pyramidal and geniculate fibres, it seems not unlikely that the other or primary centre for the association of muscle sensation is the corpus striatum. Should this prove to be so, then, as the optic thalamus is responsible to the cortex for supplying it with associated material from which our primary ideas of attributes arise, so the corpus striatum is responsible for supplying it with the associated material for the recognition of our space and numerous muscle-sense relations, and so, ultimately, for the material for all the higher and more abstract thoughts.

In the paragraph dealing with the probable anatomical explanation of the association of sight with the other senses in the optic thalamus, it will be noticed that the new fibres reaching the thalamic cells are mentioned as arising in the cortical visual cells, and not as being collaterals from the fibres in the optic tracts as they pass through or near the thalamus. Proof that the association is not due to collaterals is derived from the fact that in blindness caused by tumours in the occipital region, although the retinal and corresponding tractal fibres are not impaired, stimulation of the retina has not been mentioned as giving rise to any other perception, such as one of roughness, smoothness, etc., which one would expect to get if the association were brought about by collaterals which arose from healthy nerve-fibres before they reached the seat of injury.

Another fact in favour of the optic thalamus being a purely association centre connected with the various parts of the cortex was mentioned in the paragraph dealing with its anatomical relations, namely, that the path along which nervous impulses descend from it to the lower centres is not certainly known; for if its function be to associate the various cortical sensations these paths would be unnecessary, and, therefore, non-existent.

(<sup>1</sup>) A paper read at the Spring Meeting of the South-Western Division held at Bailbrook House, Bath, on April 29th, 1910.

In the discussion which followed, Dr. AVELINE asked if the optic thalamus had

been found diseased in many other cases of dementia. Dr. BLACHFORD pointed out that as far as he could ascertain it had not been so, and that in those cases following acute insanities, epilepsy and general paralysis, there apparently never occurred the very profound dementia arrived at in the cases here mentioned, and it was this fact which made him suspect that the change giving rise to it must take place at the very centre, where the association of the sensations, more especially the more relational, occur.

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*Some Points concerning the Diagnosis and General Treatment of the Feeble-Minded.* By W. R. DAWSON, M.D., F.R.C.P.I., Medical Superintendent, Farnham House, Finglas, Dublin; late Medical Investigator to the Royal Commission on the Feeble-Minded.

THE class of defectives with which I propose to deal briefly in certain of its aspects consists of those persons over school age who are capable of earning a living in favourable circumstances, but are incapable, from mental defect existing from birth or from an early age, (a) of competing on equal terms with their normal fellows, or (b) of managing themselves and their affairs with ordinary prudence—a definition which, though rather rough, may be accepted as of some value in practice. Such persons have been found by the Royal Commission on the Feeble-Minded to constitute about 40 *per cent.* of all aments in the United Kingdom; and it has been estimated (<sup>1</sup>) that their numbers in England and Wales amount to between 50,000 and 60,000. In my investigation, in the City of Dublin I found 365, or 30 *per cent.* of all aments. Thus they deserve separate study from their numbers alone, apart from the fact that, owing to their relatively high intelligence, they at once are more dangerous socially, and repay help better, than any other class of aments.

As regards *detection*, these cases naturally range themselves in two classes, *viz.*, those who, as defective children, have been at special schools, and are therefore already recognised, and those who have had no such advantage, a large proportion of the latter (three-fourths in the Dublin investigation) being found in workhouses and prisons. The balance of numbers will incline more and more in favour of the former class with



the development of special schools and institutions, until eventually it may be hoped that the numbers of the undetected and undealt-with feeble-minded will become insignificant. In passing, the curious discrepancy in numbers between the adult feeble-minded and the defective children may be noted, which was conspicuous in my investigation as in those of others. It has been thought that in urban districts this may be due to the known tendency of the mentally feeble to drift into the country, where the conditions of life are less strenuous and employment requiring little intelligence is more readily found. On referring, however, to the report of Dr. Mills, who investigated a rural district in Connaught, I find precisely the same discrepancy, and must therefore conclude that the difference in numbers is partly due to the dying off of very many defective children before they reach adult years, while some cases become insane at the dangerous period of early adolescence, and pass into the asylums; and lastly, it is probable that a considerable number of apparently defective children in the schools are merely backward, and that these will have overtaken their fellows before reaching the age of 16. However this may be, it is in the case of those who have not come under special observation in their school years that difficulties of detection and diagnosis will chiefly arise.

The difficulty of detection varies very much, and is, roughly speaking, inversely as the degree of mental deficiency. Thus there will, as a rule, be little trouble involved in learning of and recognising the severer cases, just as with cases of idiocy and imbecility, while those who are epileptic will usually be discovered with ease. As regards even these last, however, this is not necessarily always the case, since my experience in Dublin was that, amongst the lower orders, epilepsy is regarded as casting a greater slur on a family than mental infirmity; and moreover, in the case of those at all able to earn their living, the occurrence of even an occasional seizure would be a bar to employment, although seizures, if infrequent, do not necessarily prevent the winning of a livelihood.

The distinction between idiots, imbeciles and feeble-minded, being one of degree and not of kind, is somewhat arbitrary, but is necessitated by practical considerations; and the definitions given by the Royal Commission are, from this point of view, perhaps as good as any. Thus the criterion employed to

distinguish the "feeble-minded" from those on the next lowest stage, *i.e.*, imbeciles, is capability, in favourable circumstances, of earning a livelihood; while on the other hand, as has been stated, the feeble-minded are distinguished from the normal by their incapacity from birth or early age to compete with others on equal terms, or to manage themselves or their affairs with ordinary prudence. From the extremely wide scope of the definition of feeble-mindedness, it is evident that the degrees of deviation from the normal will differ greatly in different cases; but difficulties in classification will be chiefly encountered in dealing with cases on the borders of the normal, and with those on the borders of imbecility. In most others it is in practice sufficient for the examiner to ask himself: Could the individual under any conditions earn a living, and, if so, has he as good a chance as an ordinary person? In the more difficult cases, however, these questions can only be answered after a thorough inquiry, the chief points of which may be shortly touched on.

Of great importance is the patient's *history*, both family and personal. Mental abnormality in the family of an individual affords presumptive evidence against his mental status in proportion to the propinquity of the relatives so affected. Personal history will yield important information on such points as late and faulty development of the physical and mental powers in childhood; nervous symptoms in childhood; the amount of school education which has been attained; the patient's habits, *i.e.*, whether social or unsocial; his ability in the direction of muscular acquisitions, such as games; and his moral development. The last is of great importance, as most, if not all, cases of "moral imbecility" ought to be included under the heading of feeble-mindedness; and the points to be sought for are such as indicate a tendency to objectless lying, stealing, cruelty and mischief generally, in early youth, passing into graver obliquities, often of a sexual kind, with advancing years.

Taking next the *bodily signs*, the most useful may be briefly alluded to without going minutely into the subject of stigmata. A general survey of the individual in the first place will usually yield a valuable impression as to his mental status. Although many of the cases which are most deformed and of lowest vitality never reach adult years, still smallness

of size, malnutrition, defects of shape and unevenness of development, with awkwardness of movement, and sometimes tricks, such as lurching to one side in walking, betray the faults of growth and function that go with mental defect. Of the individual details, the size and shape of the head are the most useful, and may alone be sufficient to determine the existence of mental weakness. Thus a head with a circumference of 18 in., with receding chin and forehead and prominent nose, cannot be that of a mentally normal person; and largeness of cranium, with projecting forehead and occiput, of course points in the same direction, though with less certainty. Of the smaller details, malformations of the ear, fissuring of the tongue, a high narrow or deformed palate, and irregularity in the arrangement of the teeth, are all useful points easily observed, and of the greater weight when two or three of them occur together. But on the other hand some feeble-minded persons are perfectly well formed and even comely.

Peculiarities of speech are often present, and lead us naturally to the consideration of the most important abnormalities of all, those of *mind*, with which speech is so closely bound up. One of the commonest of these, and, when very marked, one of the most fatal to any chance of earning a livelihood, is defect of the power of attention. Those in whom this power is wanting are unable to concentrate their minds upon anything for long. They cannot stick at a piece of work, or read a few pages of a book, or keep up a sustained conversation on one subject—the least thing withdraws their attention elsewhere, while the lethargic cases, wearied by the effort, lapse into their usual state of listlessness. Such individuals often seem to remember badly, but rather as a result of inattention than from any real fault of memory, which in some feeble-minded is not only not defective, but is developed to an extraordinary degree. I have in mind a man who can give, perfectly accurately, details and dates in the lives of prominent persons, and knows their pedigrees unerringly; yet he is so weak mentally that on one occasion he tried to shave with a cardboard razor, which he then handed back to the giver with the remark that it was not strong enough! Perhaps, however, the most useful faculty to test is the power of reasoning, which may be investigated by simple devices such as that mentioned by Tredgold, *viz.*, sending the individual to fetch something

from a room, the door of which was locked, but the key hung in full view. Tests with money, such as the number of half-pence in two or three half-crowns, arithmetical tests, and comparison of the sizes and shapes of objects, are all useful. Many of the feeble-minded are emotionally unstable, easily pleased or grieved, frightened or made angry, and as easily calmed again, but others are lethargic. Lack of will-power may be shown not only by inability to decide, but also by deficient self-control; and lastly, the most recent acquirement, the moral sense, may be wanting, but to decide on this the history affords the most important indications. Before leaving this part of the subject there is a practical point to which attention may be called. The persons regarding whose mental state a decision is required will be mainly of two classes, *viz.*, those for whom aid is sought by parents and guardians, and inmates of public institutions. We have seen that the majority of the feeble-minded met with in Dublin have been found in the workhouses and the prisons; and with reference to these it may be worth while to note a peculiar difficulty which has been encountered, *viz.*, to make due allowance for the lingering effects of alcoholic indulgence in those recently admitted. It was found that "a prolonged and frequently repeated debauch will often leave a degree of mental hebetude, indistinguishable from that of permanent mental weakness, which may last for a week or more."<sup>(2)</sup> Such cases require a second visit after an interval if a right decision is to be arrived at.

The difficulty in determining whether persons are capable of earning a livelihood naturally arises chiefly in the case of those on the border-line of imbecility. It is precisely here that education often turns the scale: and if it appears that such persons have reasonable self-control and obedience, and a certain power of attention, even should their intelligence be but small, a chance may be given them amongst those who are feeble-minded only. This, however, is a simple matter, practically, compared with the forming of a decision regarding those at the other end of the scale; and although it is perfectly true that there is a difference in kind, and not only in degree, between the high-grade feeble-minded and the normal, still the transition from one to the other is by no means abrupt, but often exceedingly gradual, and, moreover, it may affect the various "faculties" of mind very unequally. It is amongst cases of this class that



examples of so-called "moral imbecility" are mostly to be found, and they form some of the most difficult and troublesome cases therein. The Royal Commission on the Feeble-Minded has seen fit to classify these cases separately, though they do not consider it "scientifically correct" to group cases of *acquired* moral defect into a category apart from other "persons of unsound mind." Their definition of moral imbeciles as "persons who from an early age display some mental defect coupled with strong vicious or criminal propensities on which punishment has little or no deterrent effect," seems to me to render this position inconsistent and untenable. The moral faculty is one of the latest phylogenetic acquirements, and to a greater or less degree is probably impaired in *all* mentally defective persons. In most of these, however, this impairment is completely overshadowed by the intellectual defects, and only in a comparatively few is the opposite state of affairs to be found. But the difference is relative only, and I submit that these cases should be included amongst the feeble-minded. In practice they are very troublesome cases, not only to diagnose but to deal with, owing to the abnormal amount of intellectual development which they sometimes show, and which, in existing circumstances, renders it impossible in many cases to send them to an institution for detention. Amongst the lower orders, it is true, alcohol and general debauchery are likely to develop acquired intellectual defect in such persons, but this is not always the case, and in the higher classes of society is frequently not so. In the mildest cases the individual may merely be exceptionally self-centred, incapable of appreciating the rights and feelings of others, with little regard for time or money, and governing his conduct entirely by his own likes and dislikes, to which everything has to give way. Such an individual is obviously not detainable; yet to a person of this character, lying, drinking, sexual immorality and other vice come naturally; and in more marked cases, where also the accompanying intellectual defect is more pronounced, the latter prevents him from seeing beyond the moment's gratification to the unpleasant consequences which will follow, even if he has sufficient will-power to control himself if he did see. Apart from the pronounced moral imbeciles, there are two other classes of feeble-minded, as Tredgold points out, who are specially prone to criminal acts, *viz.*, the extremely facile who are unable to resist

any suggestion, good or bad, and those who are liable on the smallest provocation to outbreaks of violence resembling those to which epileptics are prone. All three classes require to be dealt with in very special ways, which brings us to the subject of *treatment*.

*Medical* treatment, except in the case of cretins, can do nothing directly for the feeble-minded, and it is now generally agreed that *surgical* treatment is equally powerless, though indirectly each serves a most important purpose in building up general health and correcting physical abnormalities. Further than this, all dealing with such cases must be by influences which affect their whole environment.

The feeble-minded who have been educated in special schools and classes up to the extent of their capability are never, even in the most favourable cases, quite on a par with normal folk. Even if, as now and then happens, they no longer show overt signs of mental weakness, and are able to earn fair wages, the brain weakness is still there, and the stress and worry of ordinary life, of the critical epochs of life, or any unusual shock, are always liable to cause a mental breakdown; and much more is this the case where development has been less, and the permanent defect more pronounced. It is here that "after-care" becomes a necessity for the purpose of looking after such cases generally, and seeing that they are placed in the most favourable surroundings possible and provided with employment securing some remuneration. But even amongst those who have received every advantage there will always be a large proportion of persons who cannot be left at large, while naturally those who have reached adult years without any such special training will show a still greater percentage. The feeble-minded not only develop late and slowly, but cease to develop early, so that few are susceptible of much improvement after the age of sixteen, though some may still be taught a little, and some are capable of doing useful work of an unskilled sort. A large proportion, however, will by this time have joined the ranks of the criminal classes and gone to swell the population of gaols and workhouses. I have already mentioned that, in Dublin, the great majority of the feeble-minded were encountered in institutions belonging to these two classes. The numbers in the prisons were especially striking, and as they so vividly illustrate the utter futility of merely punitive measures in dealing with

offenders of this class, I may perhaps be allowed to mention a few details. In the two Dublin prisons I found 12·21 *per cent.* of defectives, of whom 17·72 *per cent.* were committed more than once during the period of investigation, as against 8 *per cent.* of the total committals, and less than 14 *per cent.* were first committals. Two women were committed four times within a month. The average number of previous convictions for the male defectives was 17·76, and 15 of them had had over 50 convictions each, the highest being 70, 82, 85 (two), and 170. Even these numbers, however, are insignificant compared with those shown by the females, who had an average of 44·13 previous convictions each, while 19 showed 50 and over, and 14, 70 and over, the highest individual numbers being 101, 120, 127, 171, 181, 214, and 236. Of these, a lad, æt. 17, had had eight convictions; a man, æt. 23, 63 convictions; while the woman who heads the list with 236 previous convictions was only 29 years old! Surely this is a *reductio ad absurdum* of our present methods of dealing with feeble-minded delinquents, or, indeed, with any class of habitual offenders. To such, short periods of imprisonment are no deterrent, and merely serve to restore their health and strength in preparation for another outbreak on their discharge. In this country such persons are practically always alcoholic; and as, moreover, their immediate admission to institutions inhabited by the better-behaved defectives is not to be thought of, in the interests of the latter, the simplest and most effective method of dealing with such would seem to be the development of the inebriate reformatory system, a system which, even in the comparatively small way in which it has been tried, has already yielded promising results. To be really efficient, however, the system should be extended by further facilitating the committal of recognised inebriates to such institutions for periods of not less than two years, to be followed by a longer or shorter period of probation under surveillance. Even with the existing law, however, more might be done if magistrates could be induced to make further use of the facilities at their disposal. A sojourn in such a reformatory would have an improving influence in other respects than alcoholic indulgence, by breaking the habit of petty crime, separation from criminal associations and the gradual development of habits of thrift and industry.

Apart altogether from the delinquents, however, a large

class of feeble-minded will be left who cannot be allowed to enter the rough-and-tumble of life for the purpose of earning their living without much supervision, or who have unsuitable homes, or no friends to look after them. This group will also include almost all the younger women, whose mental weakness continually exposes them to the risk of becoming mothers and so perpetuating their own infirmity. And with all these, we may note in passing, may be taken imbeciles, and the class of so-called "harmless insane," as the same kind of provision is suitable for them all. The worst cases will undoubtedly require to be kept in institutions, under constant supervision, and epileptic cases would require special institutions for themselves. Such as are liable to fits of uncontrollable violence, or (pending the establishment of special institutions) are epileptic, ought to be detained in public asylums or in annexes immediately connected with them. An absolute essential for such institutions is abundance of land for farming purposes. Work is necessary for the well-being of defectives, and outdoor work, such as is afforded by gardening or farming operations, not only is healthier, but requires little skill when carried out under supervision. Indeed, in all cases this is desirable, and for the bulk of such persons there can be little question that institutions on the colony system are best. Institutions of any sort are, however, costly, and in view of the numbers to be provided for, finance is a most important matter. For this reason, and also because of the inherent value of the method, it was a matter of disappointment that the recommendations of the Royal Commission did not lay more stress on the system of family care—a point which has been animadverted on by one of the Commissioners themselves, Dr. Dunlop. Yet it seems probable that, for financial reasons, some such method of dealing with defectives, at once cheap and (for suitable cases) efficient, affords the only chance that the recommendations of the Royal Commission will be carried into effect within any reasonable time. The saving effected in Scotland by the boarding-out system has been estimated at between £40,000 and £50,000 a year.

To sum up: There will be required for the best class of the feeble-minded a certain amount of supervision and friendly care in their own homes, to be exercised—if the recommendations of the Royal Commission be adopted—by regular officials in



the case of registered and certified persons, in the case of others by after-care associations; for those a little lower in the scale, or much lower provided they are healthy and at the same time quiet, harmless and manageable, some system of family care—and here it may be noted in passing that such cases form 35 *per cent.* of the patients at Gheel, and 45 *per cent.* of those at Jerichow. For special classes special institutions will be wanted—colonies for epileptics, reformatories for inebriates, mental hospitals for those subject to attacks of insanity, and closed institutions of a less expensive class for such as need much supervision without the highly specialised treatment of a hospital.

Amongst the latter would be included female defectives of child-bearing age, even when comparatively high in the intellectual scale, as experience unfortunately shows that it is not altogether safe to treat these on the “family care” system. And before concluding I should like to add a few words on this, which may be called the preventive aspect of the treatment of defect. No fact has been brought out more clearly by the valuable inquiries of the Royal Commission than the hereditary nature of mental defect, thus reinforcing the views previously held by most; and therefore it is clear, as has been pointed out by them in other words, that measures desirable for the safeguarding of the individual defective have the further advantage of checking the propagation of defect. But there is another factor of the importance of which the Royal Commission are not so assured, *viz.*, the influence of parental alcoholism. Yet in addition to the *à priori* probability that alcohol circulating in the blood of the parents must have a prejudicial effect upon the germs of the offspring’s nervous system, there is a considerable body of evidence tending to show that it does so. To mention only a few facts; it has been shown in the case of dogs and fowl that alcohol causes them to produce abnormal offspring; in human beings, out of 1,000 cases of mental defect parental alcoholism was found in the father in 471 cases, in the mother in 84, and in both in 65. In another series it was found in 46.5 *per cent.* of 150 idiots and imbeciles. Galton found a case where a man who was the father of several normal children became a drunkard and had imbecile offspring. Again, in 10 sober families, of 61 children born, 50 survived infancy and were normal, whereas in 10

families where one or both parents were alcoholic, out of 56 children born only nine surviving infancy were normal. Such examples might be multiplied indefinitely, and are at least highly suggestive, and Dr. W. A. Potts, who has gone into this subject at considerable length, arrived at the conclusion that although paternal alcoholism alone has not been clearly proved to produce mental defect, it is plainly a most unfavourable element, "while maternal drinking, and drinking continued through more than one generation, are potent influences in mental degeneracy." If this be so, clearly it will not be sufficient to seclude merely the feeble-minded inebriates, but it ought to be possible to detain other chronic inebriates also compulsorily. A Committee of the British Medical Association long since recommended on somewhat different grounds that compulsory detention should be legalised, with proper safeguards, in the case of persons who, by reason of addiction to alcohol or other drug, are at times dangerous to themselves or others, or at times incapable of managing themselves or their affairs; and the Departmental Committee on the Inebriates Acts has more recently endorsed this view, which will command the assent of most sensible people. But under this heading it ought also to be made possible to transfer inebriate lunatics, on their mental recovery, to inebriate reformatories or homes for a prolonged period, as it is notorious that these cases recover mentally long before there has been time for the eradication of the drink habit, and being discharged, are a source of infinite mischief and expense, constituting as they do probably the largest class of recurring cases of insanity.

If some such stringent treatment of all inebriates be adopted, in addition to the effective supervision of the existing feeble-minded, I am convinced that the problem of dealing not only with mental defect, but also with acquired insanity and with crime, will be one of rapidly diminishing importance for future generations.

(<sup>1</sup>) A. F. Tredgold, *Mental Deficiency*, p. 147.—(<sup>2</sup>) "Report on the City of Dublin," *Royal Commission Report*, vol. vi, Appendix, p. 413.

#### DISCUSSION,

At the Autumn Meeting of the Irish Division, on November 6th, 1909.

Dr. GREENE said that the percentage of defectives in the Ennis Inebriate Reformatory was not so high as that found by Dr. Dawson, but one of the inmates, a female, had had 366 convictions, and was now in the asylum. Magistrates could not send patients to inebriate homes unless their County Councils contributed,

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and in the case of the reformatory at Ennis there must be conviction of an indictable offence at quarter sessions, together with habitual inebriety. Sixty *per cent.* of the discharges from Ennis did well. If the inebriate relapsed within eighteen months he might be sent back to complete his sentence. Only three cases had come to the asylum from the reformatory in eleven years out of some three hundred cases.

Dr. MILLS emphasised the necessity of providing for feeble-minded persons as they grew up, since they were commonly the worst treated members of the family, being made to do all the heaviest work, and worst fed. Such persons were very susceptible to alcohol, and publicans often employed them and paid them in porter. Most typical village drunkards were distinctly feeble-minded and deficient in the power of providing for themselves.

Dr. FITZGERALD expressed himself as in general agreement with the views expressed in the paper, and cited, as showing the influence of parental alcoholism, two cases of first children who were idiots, the fathers having been drunk on the marriage night. He regarded extreme mobility of the phalangeal joints as an important stigma. A woman in the Cork gaol had had 440 convictions.

Dr. NOLAN quoted Dr. Shuttleworth as to the great percentage of deaths from tuberculosis at an early age amongst Mongolian imbeciles. He had himself maintained the importance of maternal alcoholism. Mr. Fagan had urged the desirability of training feeble-minded and normal children together, but his own knowledge of institutions for children did not bear out this view, and he thought the imbecile child had a bad effect on other children.

Dr. LEEPER pointed out that the duty of providing for epileptics had not yet been undertaken in this country, and he thought that the condition of this class should be first taken in hand. Alcoholism was not always productive of alcoholic insanity.

After a few remarks from the CHAIRMAN, Dr. DAWSON briefly replied, mentioning, amongst other things, that in alluding to the committal of inebriates he was referring to the Ennis Reformatory.

*Observations on Epileptics—Illustrating their Reaction to the Purin in Diet.*<sup>(1)</sup> By LEONARD D. H. BAUGH, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Gartloch Mental Hospital.

In a former paper (1) diet was referred to as a part of the management of the epileptics under care in a mental hospital, and the opinion expressed that, on a diet mainly *purin-free* (2), tendencies to serial fits, confused states and dream states appear less marked.

Further investigations tend to confirm the accuracy of the statement then made, and as the subject is one of interest, and one not as yet fully explored, summaries of some of the observations are submitted.

The first is a synopsis of three and a quarter years' study of the effect on epileptics of diets of different purin standards. Three diets have been used, and are termed "poor," "moderate" and "average," according to their purin content. Seven chronic epileptic women, illustrating different degrees of mental evolve-

ment and phases of epilepsy, were selected, from those who had been for some time under care, and in whom there was no reason to expect new developments.

To exclude other factors and to minimise the margin for error, all were chosen from patients who lived, and if workers, worked, in the epileptic ward, and were thus least likely to have their lives affected by environmental changes. With the exception of C. L—, who needed for a few hours daily a rest in bed, the cases, apart from their epilepsy, enjoyed average health. At times during the three and a quarter years, on account of epileptic manifestations, milk was given for a few days instead of the prescribed diet. In the case of M. B—, owing to an attack of scarlet fever observation was interrupted and was not resumed.

The existence of a period of variation resultant from change of diet is generally acknowledged. Although the extent of this variation can be only approximately estimated, it should probably be taken more into account than it often is.

In these chronic cases, I have decided to consider the first three months on each diet as a period of variation and adaptation. The six months following the arbitrarily fixed period of adaptation is regarded and studied as typical of the diet. The adaptation periods themselves appear worthy of some consideration, and are incorporated in the table alongside of the tabulations of diet periods.

Before giving tabulated results, one would like finally to mention that precautions were taken to guard against autotoxic absorption from the alimentary canal throughout the course of the observations.

It is noteworthy that these chronic cases, placed as far as possible, to react to dietetic changes alone, do not show the rapid response to change of diet to which some writers have drawn attention.

In J. M. D—, M. D—, and H. G—, all of energetic types, as might have been expected, an increase in nitrogenous food appeared at first to exercise a favourable influence; this lasted as long as the purin standard was not raised too high, or the high proportion of purin was not too long continued.

If weight rose and then fell slightly, it appeared that it might be interpreted as an indication that the higher purin standard had been continued for as long as was beneficial.



As these cases, on purin-moderate diet, got five or six meat meals in a fortnight (thirty-five in three months), as well as cod and tripe, it suggests that some might do very well with such a purin-containing meal, say, twice a week (twenty-six in three months), over considerable periods of time.

It would appear that purin-poor diet, although often the

TABLE I EPILEPTIC. PATIENTS WITH STATE BEFORE OCT-1906.		DIETS AND THEIR DURATION.							
		PURIN POOR 6 months OCT-06-MAR-07	ADAPTATION PERIOD PURIN MODERATE 3 months APR-JUNE-07	PURIN MODERATE 6 months JULY-DEC-07	ADAPTATION PERIOD PURIN AVERAGE 3 months JAN-MAR-08	PURIN AVERAGE 1st 6 months APR-SEP-08	PURIN AVERAGE 2nd 6 months OCT-08-MAR-09	ADAPTATION PERIOD PURIN POOR 3 months APR-JUNE-09	PURIN POOR 6 months JULY-DEC-09
(1) IMBECILE, VERY LOW GRADE INSTABLE AND EXCITABLE. FITS—TEND TO SERIAL WORK—UNABLE	FITS— CONFUSION WEIGHT—119	47. 1 SERIES 119 — 116	20. 116 — 115	32. 2 SERIES 115 — 99	12. 99 — 95	32. 1 SERIES 95 — 92	26. 1 SERIES 92 — 93	17. 93 — 98	28. 1 SERIES 98 — 102
(2) CHILDREN, MODERATELY INSTABLE. FITS—TEND TO SERIAL WORK—UNABLE	FITS— CONFUSION WEIGHT—119	127. 2 SERIES 119 — 116	66. 1 SERIES 116 — 115	92. 1 SERIES 115 — 105	50. 2 SERIES 105 — 94	93. NO SERIES 94 — 93	63. 1 SERIES 93 — 97	97. 1 SERIES 97 — 96	96. 1 SERIES 96 — 102
(3) CHILDREN, MODERATELY INSTABLE. FITS—TEND TO SERIAL WORK—UNABLE	FITS— CONFUSION WEIGHT—119	46. 105 — 102	20. TRANSIENT 102 — 102	45. TRANSIENT 102 — 101	20. TRANSIENT 101 — 100	62. 1 SERIES 100 — 99	49. 1 SERIES 99 — 98	24. SHORTER 98 — 101	46. TRANSIENT 101 — 100
(4) NOT FULLY DEVELOPED ENERGETIC, MODERATELY INSTABLE. FITS—FEW ISOLATED CONFUSION—NONE HYPOCHONDRIACAL DREAM STATES AT TIMES DREAM FROM FITS WORK—UNABLE	FITS— CONFUSION WEIGHT—119	5. 96 — 96	4. 96 — 97	2. 97 — 99	0. 99 — 96	0. 96 — 94	2. 94 — 92	0. 92 — 95	0. 95 — 94
(5) WELL COLOURED HYPOCHONDRIACAL FITS—FEW ISOLATED CONFUSION—NONE HYPOCHONDRIACAL DREAM STATES AT TIMES DREAM FROM FITS WORK—UNABLE	FITS— CONFUSION WEIGHT—119	31. 146 — 139	23. 1 SERIES 139 — 144	34. 1 SERIES 144 — 147	16. 1 SERIES 147 — 148	22. 1 SERIES 148 — 141	26. 1 SERIES 141 — 140	10. 1 SERIES 140 — 140	16. 1 SERIES 140 — 139
(6) CHILDREN, MODERATELY INSTABLE. FITS—TEND TO SERIAL WORK—UNABLE	FITS— CONFUSION WEIGHT—119	27. 131 — 131	12. NONE 131 — 130	23. NONE 130 — 122	11. NONE 122 — 120	28. NONE 120 — 118	28. NONE 118 — 122	12. NONE 122 — 129	28. NONE 129 — 133
(7) CHILDREN, MODERATELY INSTABLE. FITS—TEND TO SERIAL WORK—UNABLE	FITS— CONFUSION WEIGHT—119	38. 1 SERIES 126 — 126	3. 1 SERIES 126 — 113	5. 1 SERIES 113 — 108	5. 1 SERIES 108 — 101	22. 1 SERIES 101 — 96	57. 2 SERIES 96 — 105	23. 1 SERIES 105 — 107	56. 1 SERIES 107 — 111

best for good general health, does not always mean fewer fits; some seem to have more fits on such diet.

In connection with the incidence of fits, from the study of the table it is strikingly noticeable how an erroneous conclusion regarding the patient's state can be arrived at by noting the number of fits alone; e.g., M. D—, who has very few fits at any time, had fewer than usual when on purin-average, but as

against that lost a little weight, and more often passed into the phase which, for want of a better descriptive term, I refer to as "hypochondriacal dream states."

Further, on purin-average diet, M. M. G— and M. S—, while they showed diminution in number of fits, showed no improvement in general condition; both lost weight. M. M. G— culminated in a series, and M. B— developed serial manifestations as a new feature in her case.

That, when on purin-average diet, serial epilepsy manifested itself for the first time in M. B— and J. McD— is deserving of mention.

That auto-intoxication from the bowel could be excluded in both M. B— and J. McD— suggests strongly that the strain on metabolism played an important part in the production of the serial fits. The vexed question, the toxæmic cause of serial epilepsy, is outside the present purpose, but the intensification in the two mentioned and in C. L—, plus, in her, marked depreciation in health, may be noted as significant of a toxæmia.

### *Second Summary.*

Here we deal with a male who was never employed at anything beyond light ward-work. The period considered is two years and ten months, and during the greater portion of the time he got bromide.

J. G—, æt. 13, feeble-minded, stated to have fits frequently, was admitted in May, 1907.

As there was no prospect of mental recovery he was regarded as a suitable case to watch for some time without taking any steps to ameliorate his condition.

He was allowed to go about whenever his attacks permitted, and was given purin-average (ordinary asylum) diet.

From May 7th to June 30th he had 193 fits, was lethargic and lost three pounds in weight.

In July he was put on potassium bromide, gr. xxx, thrice daily. His attacks diminished in number (169 in six months), he gained a stone in weight, but mentally he continued much the same.

During this six months he took purin-average diet, except for about three weeks in October, when, owing to a succession

of serial attacks (eight-six fits), he was kept in bed, lost weight, needed chloral as well as bromide and was on milk alone.

The year 1908 was on the whole uneventful. He had bromide regularly.

Except during a breakdown (seventy-one fits) in May, he had purin-average diet.

At the end of December he weighed 7 st. 12 lb.—an increase of 16 lb. since corresponding time in 1907.

He had 249 seizures during the twelve months, and was not any more alert.

In 1909 purin-poor food was given instead of purin-average diet.

Bromide was continued until June 14th. He had forty-six seizures (twenty-nine in March) in five and a half months, weight remained stationary, and mentally he was much the same.

Bromide was discontinued on June 14th, and he became more active in his habits, and more alert mentally.

His weight rose from 7 st. 11½ lb. to 8 st. 5 lb. by January 13th, 1910.

There was no increase in fits on cessation of bromide: he had fifty-nine (twenty-four in September) in seven months.

This year, on January 12th, he was replaced on purin-average diet: he had seventeen fits in the last eighteen days of January.

During the first eight days of February he was very lethargic, and after fits (seventeen in number) his confusion became very marked.

On the 6th it was feared a serial attack would pass into status epilepticus, and for two days he got milk alone.

Purin-poor diet was resumed on the 9th.

From the 9th to the 16th he had eighteen fits, and remained silly.

Between the 17th and the 24th, six attacks occurred, and he was a little more alert.

On the 26th and 27th he had a fit each day.

Three seizures on the 28th were separated by hours and there was no post-confusion; this is best shown by quoting written report of charge nurse: "Five minutes after each fit he was quite clear. I asked him to rise, lift the pillow, and put it back on the bed. He did all asked in his usual way."

It may be, that the time during which a richer purin diet was again exhibited coincided with one of his "fit" states, but in number of attacks and presence of serial epilepsy, lethargy and post-confusional states, this attack, which occurred during and immediately following the administration of purin-average diet, is only paralleled by the condition seen on three previous occasions while on similar diet.

### *Third Summary.*

In this case the patient was employed in the laundry during most of the two years reviewed ; the factors of work and extra food have thus to be taken into account.

J. S—, a good worker, usually contented and sensible, a little over 10 st. in weight, had been on purin-average diet for about twelve months, and had averaged about twelve fits a month. After a fit she showed confusion, frequently less than one hour in duration, always less than one day.

In February, 1908, she went to the laundry to iron and work in the sorting-room ; there she had extra purin in the form of soup, given as lunch to laundry workers.

There was a period of gain in weight, during which well-being and capacity for work were maintained. This lasted until June 22nd (nearly four months), when she became confused, had to go to bed and take milk for a couple of days before confusion cleared up ; she then rallied, and resumed work on the 27th.

From June 27th she remained at her normal for two months ; then a severe serial attack necessitated her being in the ward for over a fortnight until middle of September.

Before this attack she lost weight slightly, just as she had done previous to the breakdown in June.

She next worked at laundry for one month ; again becoming confused, she was kept in the ward over a fortnight.

As it was considered that diet and hours of work might combine as causative factors of confusion, on November 4th was put on purin-poor diet, and only sent to the laundry in the forenoon. Under these conditions she did well for three months, up to a serial attack on January 30th, 1909. She soon returned to the laundry, only to break down again on February 16th, and had to undergo bed-treatment until the 28th. All March,



and first part of April, she showed a lot of confusion. Although well in latter portion of month, she was kept in the ward. In May, she was sent to work in the laundry the second part of the day, so as to miss lunch, and continued to get purin-poor diet at meal-time. Working under these conditions she maintained her normal for six months.

In November, a promise not to take soup for lunch having been obtained from her, she started to work all day in the laundry, and maintained capacity for work and freedom from confusion (save of the transitory type usual to her), but showed more irritability than her wont. On January 8th she had a breakdown, and was off until the 14th, when she resumed and worked until the end of month, thus doing nine months with only one breakdown of six days' duration during the ninth month.

#### *Fourth Summary.*

Here the factor of extra food imposes greater strain, therefore the reaction is more striking.

Epileptics, employed as kitchen workers, gave the general impression that they tended to break down and show confusion oftener than others. In order to investigate this, four cases so employed were selected for observation.

The notes on two are withheld, as close investigation revealed the facts that in one constipation, along with frequent alimentary upsets, introduced complicating factors; and that in the other, fits and breakdown were associated, or, at any rate, coincident with menstruation.

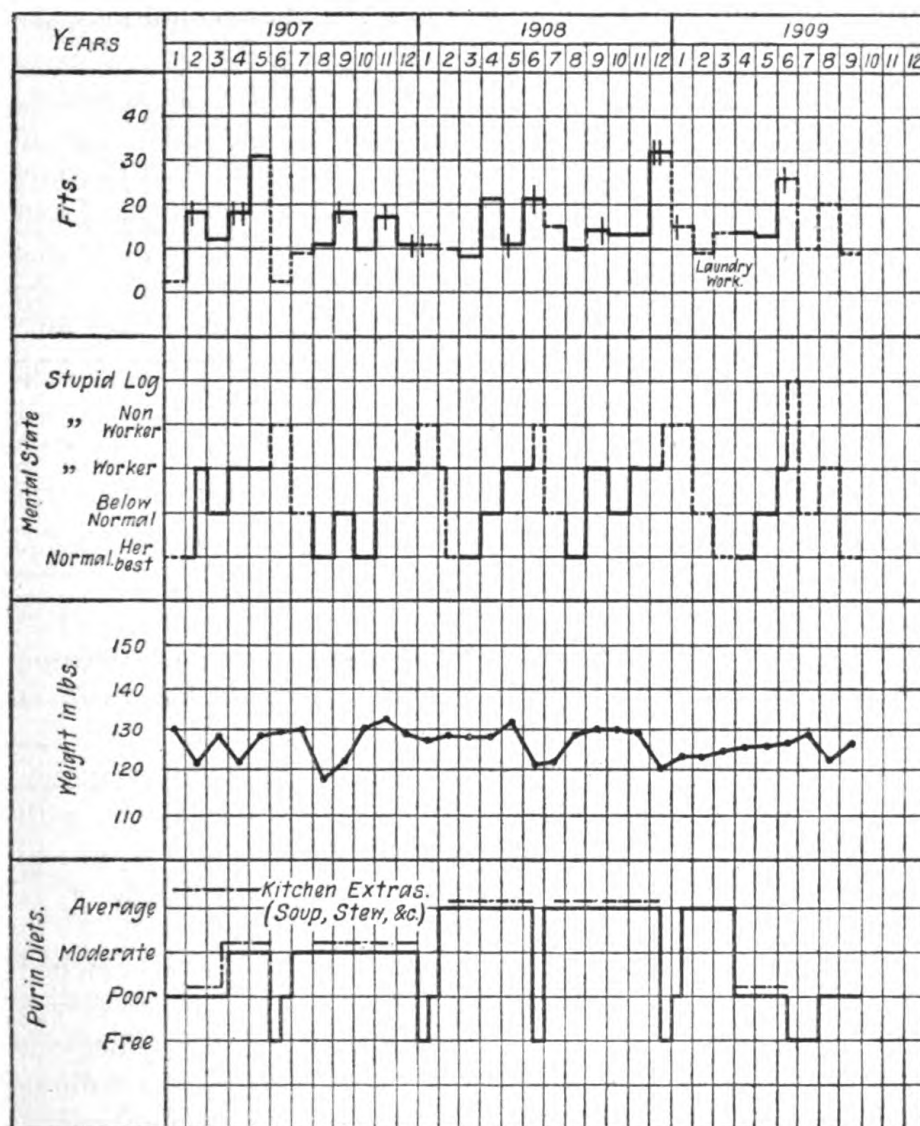
In this connection, a question of such interest is reached that it is worthy of digression to point out that, of eleven menstrually active cases utilised for this paper, this ruled-out case (C. K—) is the only one in which there was a definite association between epileptic and menstrual manifestations. Attention is drawn specially to this, as it is at variance with the usual statement found in books, and it can unhesitatingly be said that, in the eleven cases referred to here, the periods at which menstruation occurred were very carefully noted.

The two whose charts are shown were, as far as could be judged, free from complicating factors.

Observation in M. M— extended over two and three quarter

years ; it was discontinued when she was selected as a subject for investigation on another point not entered into in this paper.

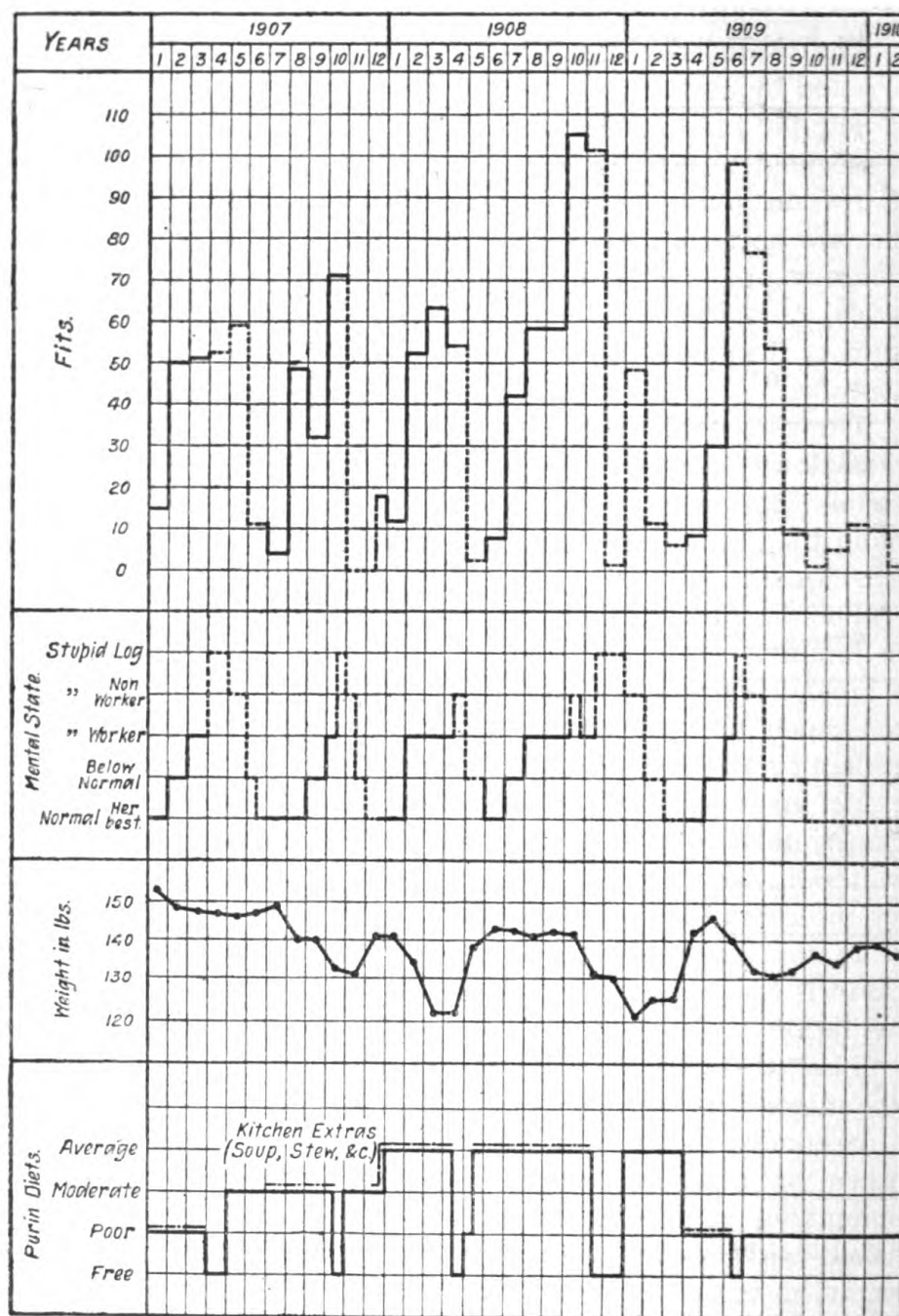
In F. G— it was carried on for three years and two months.



Case of M. M., 2 years 9 mos. — indicates at kitchen work. - - - indicates not at kitchen. | indicates a serial manifestation.

The longer period enables me to mention that, since the breakdown over nine months ago, she has been kept from kitchen work ; next, that, after emerging from past confusion etc., six months ago, she has enjoyed a comparative state of

mental and physical well-being. During this six months the



Case of F. G—, 3 years 2 mos. — indicates at kitchen work. - - - indicates not at kitchen. | indicates a serial manifestation.

fit rise is not appreciable. This period, by comparison with rest of chart, discounts strongly any suggestion that might be

advanced, as to the state developed while at kitchen work being coincident with periodicity of fit state.

The charts show graphically the investigation. Attention is arrested by one or two points particularly.

The fall in body-weight, increase of fits and mental collapse, subsequent to employment that is steadier and more active, and where purin-containing extra food, such as stews, soups, etc., are liberally partaken of, all seem to support the contention advanced (after the study of the table dealing with the seven chronics), that purin standards should not be raised high, or, if raised, that this high standard must not be too long continued.

The persistence of fit state and confusion after a complete breakdown emphasises the slow response to treatment of the metabolism in epileptics, particularly when it is borne in mind that, at such periods, the patient was given only purin-free liquids.

The fit rise and accompanying loss of weight in F. G—, in January, 1909, when diet was increased after treatment of a breakdown, I regard as due to added stress being *pro tem*. too much for metabolism, and as a further illustration of the epileptic's tardy return to the normal metabolic standard.

Before conclusion, I desire to thank Dr. Parker, the Medical Superintendent, for having granted me free permission to use material ; also other members of the staff who have aided me by the careful keeping of books, records, etc.

In conclusion, although I do not suggest that diets in which purin is low are the best for all epileptics, I do say without hesitation :

First, that observations point to such diets being suitable to the major number of epileptics.

Secondly, that the slow recuperation seen after a breakdown when on a purin-average diet, a feature shown by all the summaries submitted, supports the hypothesis that, when taxed with a diet average or rich in purin, failure of the organism to carry out metabolic functions plays a considerable part in the production of the symptoms.

(<sup>1</sup>) A paper read at the Spring Meeting of the Scottish Division, held on March 18th, 1910, at Gartloch.



## REFERENCES.

(1) The Writer.—“Observations on Insane Epileptics, treated under Hospital Principles,” *Journal of Mental Science*, July, 1908.

(2) I. Walker Hall.—‘The Purin Bodies of Food Stuffs,’ (published 1903).

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*Communicated Insanity.* by ARTHUR W. WILCOX, M.D.  
Edin., Senior Assistant Medical Officer, County Asylum,  
Hatton.

BUT why the term communicated? Is insanity catching? Such was the question asked by this Journal some five years ago referring to a case of so-called communicated insanity mentioned in a county asylum report. In this article I shall endeavour to bring evidence to show that in some few cases apparently it may be so.

Hack Tuke<sup>(1)</sup>, writing on “Folie à Deux” some twenty years ago, accepted communicated insanity as the best English equivalent known to him for this French term.

His classification was as follows :

(1) Cases in which an insane patient distinctly infects another person with the same mental disorder.

(2) Cases in which a person becomes insane from companionship, not in consequence of the direct transference of morbid ideas, but in consequence of the shock arising out of the painful impressions caused by witnessing the attack or by the strain of nursing a patient.

(3) Cases in which two or more persons become insane simultaneously from the same cause.

(4) Cases in which one lunatic infects another lunatic with his special delusions.

(5) Twins.

The last two divisions I shall not again refer to, as it is not uncommon to find in asylums patients who copy the actions and suffer from the same delusions and hallucinations as other patients with whom they are brought into daily contact, but as these persons are already insane they can hardly come under the category of cases of communicated insanity in its strict sense ; while *la folie gémellaire* is now generally recognised as being quite distinct from *folie à deux*.

Hack Tuke admits that if we restrict ourselves to the idea of contagion or communication of mental disease to another we must dismiss from the above divisions the second and third categories, but he found it convenient to use the term *folie à deux* in a wider sense and to include them as did the French writers. The term *folie simultanée* given us by Régis accurately describes the third division, although he himself used it as a synonym for *folie à deux*.

Communicated insanity affecting large numbers of people, sometimes religion and sometimes politics being the exciting cause, has occurred throughout all ages. Lombroso declared that there are mental epidemics as well as physical, and he attributed the frequent outbreaks of anti-Semitism, by which his own race was afflicted, to this cause.

The latest example of an epidemic of contagious political insanity in our own times is seen in the unlawful and in every way extraordinary conduct of the suffragettes. Whatever the justice of their cause may be, most people will agree with the stipendiary magistrate who, with a pleasing alliteration, characterised their conduct as "neither polite, politic nor political." It has been pointed out that should the hunger strike have been allowed to continue and any one of this misguided band of females been permitted to commit suicide by starvation, the verdict of the coroner's jury would undoubtedly have been to the effect that she committed the act "whilst temporarily insane."

The first case recorded by Tuke in the above-mentioned article comes under his first division. Neither of the patients, a gentleman and his wife, had an insane inheritance. The wife was an Irvingite, who was induced to try some experiments with the planchette. She was the more strong-minded of the two, and in the author's opinion it was she who drew her husband into the same path rather than the planchette. She became a demonomaniac (Esquirol), was deluded and suffered from auditory, visual and olfactory hallucinations. She then infected her husband, who became the victim of exactly the same distressing delusions and hallucinations as his wife. Both patients ultimately recovered, although they utterly refused to be separated during their period of alienation. The husband, however, admitted some time after he had been able to return to his business that he still heard voices when

tired, but that he did not listen to them or tell anyone about them.

Ten years ago E. W. Griffin reported in this Journal an interesting case, which falls under the second division of Tuke's classification.

Two sisters were admitted to the asylum (one four days after the other) suffering from acute mania. No family history of insanity could be ascertained. Both had been nursing a third sister suffering from mental aberration, and became insane, not from any direct transference of morbid ideas, but from shock arising from the powerful impression caused by witnessing the attack and the strain of nursing the patient. Four years later J. R. Lord added another to the recorded cases of true *folie à deux*.

It is that of a mother, who in a very short time infected her daughter, their mental disorder taking the form of paranoia chronica.

This infection was probably helped, the author thinks, by a similarity of mentalisation and temperament, the network of delusions, which was a prominent symptom in both cases, being probably elaborated between them—a double contagion, each infecting the other. Both complained of persistent annoyance for the last twelve years by a Salvation Army officer, who, as a matter of fact, had been abroad for the last nine years. They constantly saw this person running in front or walking behind them in the street and looking through the window at them when they entered a shop. This took place both when they went out together or separately. They blamed this poor man apparently for all the evils, real and imaginary, which had befallen them during these years.

Within another year Goodall mentions a case of a father and two daughters admitted to the same asylum at the same time.

In this case there existed neurotic degeneration in the family, lonely surroundings, unusual anxiety, stress of mind amongst those attacked, and a terrifying suddenness of onset in the first case. Another curious feature was that death occurred in the same way and from the same cause in two of the cases.

Urquhart refers in his *Morison Lectures*, published some two years later, to the case of two sisters, the younger of whom brought the elder to the asylum possessed of the necessary papers for her detention. Both presented the same pronounced

delusions of persecution, both had experienced the same mysterious influences, both had to obey simultaneously commands issued to them at the same moment, and both had seen the same visions. The elder sister, who dominated the younger and was the suggester of every morbid idea, had been insane for a considerably longer time than had the latter. The two cases were not by any means simultaneous in inception or development or symptomatic phenomena, and the author thinks that in this particular instance the occurrence of two cases of insanity in the family was only what might have been predicted. A history of heredity was ascertained, although at first denied, and he says (the italics are his), *I do not believe that any case of this kind could be traced to a family other than neuropathic.*

He points out that the incidence of *folie à deux* is more common in France and Ireland than in Scotland, and, I would add, than in England also.

A typical case of *folie à deux* in which the wife infected her husband has recently been under my own observation. The wife on admission was suffering from paranoia. She was a steady, hard-working woman, æt. 49, who had been married to her present husband for the last seven years. She had two children by a former husband, as had also her present husband by a former wife. No hereditary history of insanity could be obtained. Her father died at the age of forty-two of bronchitis and asthma, and her mother at the age of seventy-one of the like diseases. Two brothers and one sister were alive, and healthy mentally and physically. She had been confined in an asylum for a short time a few years ago, but I did not obtain this information until some time after her admission.

Her medical certificate was to the effect that she saw and heard certain people, generally two men and a girl, about the house at night, and also following her about during the day. She described them as "show-people," and said that they wanted her head to put in their show. Her husband's daughter and her own daughter by her former marriage she believed were bringing these people to take her away, and that her only neighbour was lodging them. Her husband corroborated these statements, which he believed to be true in every detail. After her admission she quickly lost her hallucinations, but continued to be a paranoic with systematised delusions of suspicion and persecution against her own and her husband's daughter. She would describe how these show-people would throw stones at the window, and if this did not annoy them sufficiently would climb up a ladder and blow foul gases, smelling of sulphur, into the bedroom. They also, by means of electric batteries she thought, would make her hands twitch and her mouth be drawn to one side, or she would find that she was rocking to and fro on



her chair, or in the night-time that she was being dragged out of bed. She assured me that her husband when he came to see her would confirm all that she had told me, and that he also endured similar sufferings. During her residence in the asylum she was industrious and well conducted and gave no trouble. She was ultra-polite, dropping a curtsy when addressed, and evidently prided herself on her manners. She was loquacious, and fond of bragging how well she had brought up her daughter (who she said had married beneath her), and what a good education she had given her. She would also mention the names of numerous gentry who would speak as to her own good character and respectability, although these were never in question.

I had an interview with the husband when he visited his wife about a month after her admission. I found that he also was the subject of paranoia, with exactly the same delusion as that under which his wife laboured, and that he had suffered from many of her hallucinations also. He was a steady, hard-working farm labourer, in a good situation and well thought of by his employer. No family history of insanity was obtainable. He stated that he regularly got up at five o'clock in the morning, milked fifty cows, and then occupied the rest of the day in working on the land. He was very comfortable and happy with his present wife for some time after their marriage. She then began to complain of constant annoyance during the day and night by some show-people. It was a month or two before he also became one of their victims, and not until his wife had often wondered why he, too, could not see and hear them. He first noticed that during the evening, when his wife was sitting reading or sewing, she would be pulled forward or backward and nearly fall off her chair, or her hand would twitch and her mouth be drawn to one side. She would also almost nightly waken him and say, "They've come," and then nearly fall out of bed. He then found that he began to have exactly the same experiences. When his wife now began to suffer, he, too, would find that he was being pulled off his chair, that his hand would twitch, or his mouth be drawn to one side. Now, when she woke him in the night and asked him if he heard them, he would hear a noise like the winding-up of a clock, and also a "fizzing" noise, and then both he and his wife felt that they were being pulled out of bed. He never saw anyone, but had no doubt but that it was the show-people who did it, having been "put up" to annoy them by their respective step-daughters. His own daughter did not wish him to marry again, but to give up his cottage and go to live with her and her husband. When asked if he really believed that these show-people wanted his wife's head to put in their show, he said that it seemed a funny thing to say, but that he was quite sure that there was something in it. He had slept soundly and had not been worried in any way since his wife left him, but he was very fond of her and anxious to have her back again at home. A month later I again saw him. He had suffered no annoyance of any kind since his wife was taken away, but said he felt very lonely. He was still convinced that his own daughter and his wife's daughter were "at the bottom" of all the annoyance he and his wife had suffered when together. He said that if people annoyed them again when his wife returned he would do anything to stop them, even if he had to get his gun and shoot at them.

The authorities were notified of this threat, but as he continued to pursue the even tenor of his ways, no steps were taken for his certification as a lunatic.

Four months after her admission the wife was sent out on trial, and three months later finally discharged as relieved.

A few weeks after she left the asylum she wrote me a letter, which clearly showed that she was still the subject of persecutory delusions.

Since then I have been unable to glean any further tidings of her, or to learn whether her hallucinations returned and were again communicated by her to her husband when she rejoined him.

In my opinion he would most probably never have suffered from delusions or hallucinations had he not been infected by his wife. Here we have the case of a simple unimaginative yokel married to a woman (in spite of the opposition of their respective families) to whom he was extremely attached, and whom he evidently regarded as both his intellectual and social superior.

It is not surprising that when she developed these delusions of suspicion against her own daughter and his, she should after some time have impressed him with their truth, or that by constant reiteration of her aural hallucinations by day and night after some months she should have succeeded in convincing him of their actuality.

Had not fate proved unkind in his second matrimonial venture, would not this ploughman have been content after his hard day's work to homeward plod his weary way and to leave the world, material and spiritual, to darkness and to—the poet?

(<sup>1</sup>) *Brain*, vol. x, 1888, p. 408.

*Examination of the Cerebro-spinal Fluid as an Aid to Diagnosis in Certain Cases of Insanity, with Special Reference to the Protein Reaction described by Ross and Jones.*(<sup>1</sup>) By JOHN TURNER, M.B., Essex County Asylum, Brentwood.

THE value of Wassermann's reaction in the diagnosis of syphilitic and the so-called para-syphilitic diseases is now generally conceded, but, apart from the technical difficulties in carrying out the test, which places it beyond the means of all except those working in well-equipped laboratories specially licensed, the fact that it merely enables one to diagnose a previous syphilitic infection in nearly all its stages, detracts somewhat from its value as a means for the special diagnosis of general paralysis or tabes. Wassermann's reaction tells us what nearly every patient is able, if willing, to tell us; whereas the protein reactions, especially that described by Ross and

Jones, appear, so far at any rate as my observations go, to be much more specific in the information they yield. The Ross-Jones test in my hands only gave a positive result in general paralysis and *cerebral* syphilis.

### 1. *Protein Reactions.*

In 1909 Drs. G. W. Ross and E. Jones (1) described a very simple protein reaction, which consists in the addition of *clear* cerebro-spinal fluid to a *saturated* solution of ammonia sulphate, in such a manner that the fluid lies on the reagent without blending with it. In the case (according to these authors) of general paralysis, tabes, tertiary syphilis, and syphilis of the nervous system, at the junction of the two fluids a definite, sharply defined, thin white film, which has very much the appearance, when looked at against a dark background, of a cobweb, forms immediately or almost immediately. They believe that this reaction depends merely on the amount of globulin present in the fluid. Globulin, as we know, is present in normal cerebro-spinal fluid, but apparently in insufficient amount to give the reaction. I have carried out this test in the fluid from ninety-five cases of insanity, and my results would seem to show that it, especially in conjunction with a cell-count, affords most valuable help in making a diagnosis in early cases of general paralysis, and in differentiating certain early cases of alcoholic insanity from general paralysis. Although several of my cases had a history of recent or active syphilis, in only one case, syphilis of the nervous system, did I get a positive result except in general paralysis.

J. Henderson Smith and J. P. Chandler (2), writing of the Wassermann reaction, state that unfortunately in the *early* cases of general paralysis the reaction most often fails, and that even in the most advanced cases it is sometimes negative. In my experience the Ross-Jones reaction has *never* failed to give a positive result in early cases; agreeing to a large extent in this respect with the cell-count, which is usually most abundant in early cases, and which may be slight or even absent in older. In forty-eight cases of general paralysis, or suspected general paralysis, I only got a decided negative result twice: one was a case of seven years' standing, and from the clinical standpoint possessing no diagnostic difficulties; the other was a recent

case, æt. 2, of the real nature of which I am still in doubt. An advanced case of tabes with Charcot joints also gave a negative result.

All the cases (twelve) of dementia præcox, all the cases (eight) of alcoholic insanity, all the cases (eight) of epilepsy and all but one of seventeen cases not classified, including seven of secondary or organic dementia, gave a negative result. The exception gave a doubtful positive after twenty minutes. In ambiguous cases it frequently enables one to give with confidence a positive diagnosis which would without its aid be impossible. Three of the general paralytics were not diagnosed until after an examination of the fluid, although one of them had been an inmate five years, and another two years. On the other hand, three had been diagnosed as general paralytics, but the examination of the fluid indicated that this was incorrect. Two of these proved to be cases of polyneuritic psychosis, and the other a case of delusional insanity with paraplegic symptoms.

In the majority of the cases Noguchi's butyric acid test was employed also. This is somewhat more troublesome to carry out, and, so far as my experience goes, not quite so trustworthy as Ross and Jones, or perhaps one should say, not so specific, as it sometimes gives a positive reaction in cases of tertiary syphilis, and in three cases of general paralysis it gave a negative result, whereas the Ross-Jones test was only negative in one. This experience seems to coincide with Dr. G. S. Amsden's (3), who tested thirty-six cases at the Bloomingdale Hospital with Noguchi's, Ross and Jones's, and Nonne's phase 1 tests, and he found that the Ross and Jones method gave more definite and clear-cut results than Noguchi's, and that both were more sharp and delicate than Nonne's.

## 2. Cell-count.

The value of a cell-count for diagnostic purposes is scarcely, if at all, inferior to the protein reaction, and is especially useful, inasmuch as the number of cells is generally greater in early cases.

Joffroy and Mercier (4) state that the cytolysis precedes the speech and pupil symptoms in general paralysis, and Frenkel (5) finds the same as regards the pupillary symptoms in tabes.

This aid to diagnosis, although largely used on the continent



and in America, has had far too little attention given to it in England.

I have followed E. Jones's (6) method, in which 3 c.c. of the fluid is centrifugalised for ten minutes and the supernatant fluid drawn off until only a fifth of the original bulk is left. As often with the clearest fluid erythrocytes are present, although quite invisible to the naked eye even after centrifugalisation, and, as these cannot be distinguished with certainty in counting, I add to the remaining portion of the fluid two small platinum loopfuls of a 1 *per cent.* solution of methl violet, which, after standing a few minutes, colours the leucocytes a pale blue, but does not stain the erythrocytes. The deposit is well stirred up and a few drops transferred to the Thoma-Zeiss counting-chamber in the usual way, and the field of the microscope is adjusted so that its diameter corresponds to 7.5 of the small squares in the counting-chamber, the area of the field being then  $\frac{1}{90}$  mm. Three chambers are filled and thirty fields connected from each, and the total (ninety) represents the contents of 1 c.mm, but this has to be divided by five, as only one-fifth of the fluid was taken.

In fifty cases of general paralysis only six failed to show a cytosis (any number of cells below 5 per c.mm. being looked upon as negative). Three of these were chronic cases presenting well-marked clinical symptoms, two were recent cases and also well marked clinically; the remaining one was an acute case, in which several epileptiform seizures occurred the day before the puncture. In this case the diagnosis was confirmed by *post-mortem* and microscopical examination of the brain and cord four days later.

In forty-five cases of other forms of insanity only three showed a slight lymphocytosis. In one case of organic dementia with apoplectic attacks the lymphocytosis was 8.8, in another it was 7.2, and in the third, a case of dementia *præcox*, 9.9 per c.mm.

As regards the differential count, the means were not at hand for carrying out Alzheimer's method, which involves centrifugalisation for one hour, and which is stated to give satisfactory results, and I must admit that the method I employed did not give entirely satisfactory results in all cases; occasionally there was some difficulty in differentiating between endothelial and plasma-cells.

Some of the deposit, after centrifugalising for ten minutes and drawing off all but a drop or so of the supernatant fluid, was spread on slides, dried and stained in Pappenheim's stain or else Leishmann's. But if the fluid is not treated before centrifugalisation, a very large number of pale, irregularly contoured bodies with badly defined or invisible nuclei are found in the deposit. They have the appearance of cells underlying a partial digestion or disintegration, and Pappenheim (7) found that especially in general paralysis the fluid does exert a very deleterious action on leucocytes, but this action can be destroyed by heating the fluid to 56° C. I found this to be the case, but eventually discarded the heating, which was troublesome, for the addition of two to three drops of 1 in 1,000 formalin. This entirely stops the disintegration of the cells, but produces a slight shrinking in them.

The total number of cells per c.mm. varies between very wide limits in general paralysis, generally somewhere between twenty and sixty. In three it was over a hundred.

The lymphocytes form the great bulk of all the cells present—from 80 to 95 *per cent.* In only a few cases were polymorphs noticed, and these were in fluids contaminated by blood at the time of puncture. I frequently, however, noticed quite large numbers of erythrocytes under the microscope from fluid which, even after centrifugalisation, appeared quite colourless to the naked eye.

The presence of plasma-cells from a perfectly clear fluid justifies a diagnosis of either general paralysis, tabes or cerebral syphilis.

Films were also stained in Unna's polychrome blue and examined for micro-organisms, which were found in seven cases, as follows:

CASE 1.—Male, general paralytic. Swarms of diplococci (? pneumococci) occur in dense clusters, small groups, and singly. Also some slightly elongated diplo-organisms and a few longer and more slender diplo-organisms. This man was in fairly good health, and is still alive.

CASE 2.—Male, general paralytic. An acute case. Death occurred a month or so after. No *post-mortem*. Numerous short, rod-like, beaded bacilli in clusters and short chains.

CASE 3.—Male, cerebral syphilis; gummata of pons. Film crowded with diphtheroid organisms, similar to the preceding

case, and also pneumococci. Death a few months later. Autopsy.

CASE 4.—Female, epileptic imbecile. Film showed numerous tubercle bacilli and some streptococci. Patient still living.

CASE 5.—Female; alcoholic insanity (polyneuritic psychosis). Film crowded with diphtheroid organisms similar to those seen in the two general paralytics. Patient died five months later. Autopsy.

CASE 6.—Female, secondary dementia. Numerous diphtheroid organisms. Patient still living.

CASE 7.—Female; acute delirium. Film crowded with pneumococci. This last case was interesting. She was admitted April 23rd, 1909, in a state of low muttering delirium, and on October 22nd a blood-count was made, showing 8140 leucocytes per c.mm.; polymorphs, 63.25 *per cent.*; lymphocytes, 33.00 *per cent.*; hyalines 3.75 *per cent.* No eosinophiles. No organisms detected in blood. She died four days later from pneumonia and enteric. Some blood taken with aseptic precautions from the left ventricle sixteen hours after death was spread on serum and on agar tubes, and put into the incubator at 30° C.; the serum tubes remained sterile; the agar, after thirty-six to forty hours, grew two small round, yellow colonies of *Micrococcus tetragenus*, and one small, dull greyish-white colony of pneumococci.

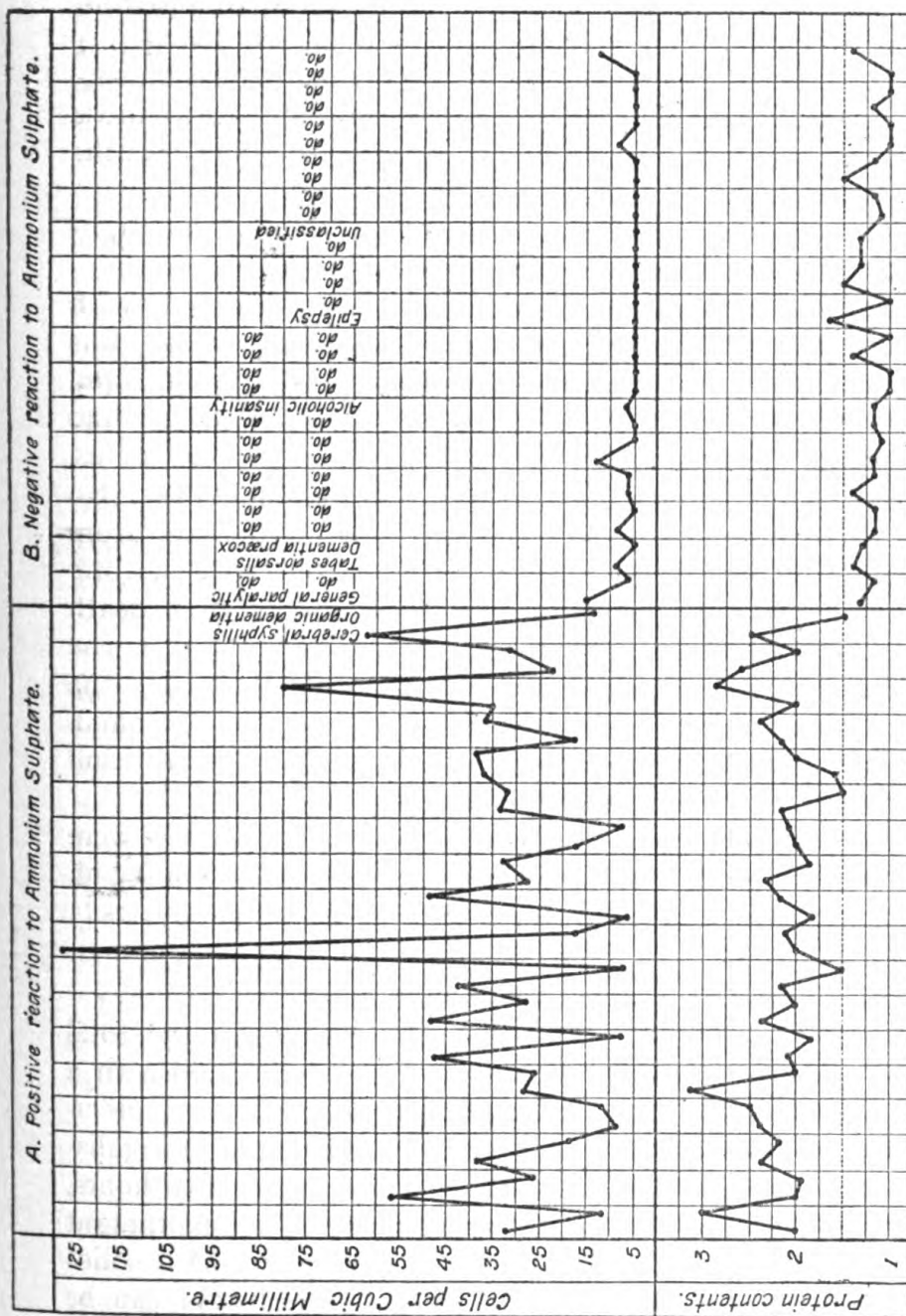
In two only out of twenty-one general paralytics were organisms similar to those described by Ford Robertson found, and they were found also in two cases not general paralytics.

### 3. Total Protein Contents.

A somewhat rough quantitative examination for the total protein contents was made by mixing 5 c.c. of the fluid with a like quantity of absolute alcohol, allowing the flocculent precipitate which forms to settle for two or three hours, centrifugalising for two minutes, again after the lapse of four or five hours, and again the next morning; by this time the supernatant fluid should be quite clear, and the precipitate forms a solid-looking mass at the bottom of the tube, and its height can be read off against the  $\frac{1}{10}$  c.c. divisions marked on the tube.<sup>(2)</sup>

A glance at the table shows that a protein content over 1.5 on the tube is almost as characteristic of general paralysis as either the protein reaction described or the lymphocytosis.

All except two of the cases in this table reacting positively to ammonium sulphate had a protein content higher than 1.5.



These results lend considerable support to Ross and Jones's contention that the ring test depends merely on the amount of the protein contents. If this reaction, however, entirely

The table shows at a glance the general correspondence between amount of protein in the fluid, the cytosis and the positive reaction to ammonium sulphate. All the positive cases except two were general paralytics. None of the negative except two were general paralytics. Although individual variations between the amount of protein and number of cells are very great, yet, with four exceptions, all the cases which show a high protein content also show a lymphocytosis, and all with a low content (below 1.5 degrees) show no, or a very slight, lymphocytosis.



depended on the amount of globulin in the fluid, it is difficult to account for a positive reaction in a few of the cases in which there was less protein than was found in two cases giving a negative reaction. According to my (8) experience, which I believe is borne out by most later investigators, practically the whole of the protein contents in the fluid of general paralytics is serum globulin. In twelve fluids which I tested fifteen years ago, after saturation with magnesium sulphate, no less than eight showed no trace of serum albumen on heating the clear filtrate, and only the very faintest trace in the other four. Purves Stewart (9), however, quotes two French observers (Guillam and Parant) as having found in sixteen cases of general paralysis that the clear filtrate, after saturation with magnesium sulphate, showed on boiling a characteristic precipitate (? serum albumen).

It might be supposed that organic brain lesions would be associated with an excess of protein in the fluid, and although to a very slight extent this was so in two out of four cases I examined, yet only one of these gave a (doubtful) positive reaction with ammonium sulphate.

J. Froude Flashman and A. Graham Butler (10) refer to this question; they found in three cases with extensive vascular cerebral lesions no evidence either of complement fixation or of increase in the total protein contents, which was only one-tenth the amount of that in the fluid of a general paralytic taken at the same time. They state that "there is no room for doubt that, apart from acute or subacute diseases, a heavy flocculent precipitate occurring in a cerebro-spinal fluid on the addition of a general albumen precipitant is very strong evidence that the fluid was derived from a case of general paralysis or tabes." This entirely coincides with my opinion.

#### 4. *Reaction (Alkaline or Acid).*

In all the cases of this series, and in twenty examined fifteen years ago, I have obtained an alkaline reaction (and not amphoteric) to litmus paper, but with phenolphthaleine the great majority gave an acid reaction. The degree of acidity, however, is in many cases very slight. A very faint pink solution of phenolphthaleine was poured into two small beakers, so that the tint in both was similar in looking down at them as they

stood upon a porcelain slab. A little of the fluid was then added to one beaker, and generally the pink colour was immediately discharged. I found that fluid left unstoppered in my room, where gas is constantly burning, rapidly became alkaline, whereas similar fluid in stoppered bottles retained its acidity, and that in my later examinations where this source of fallacy was recognised and excluded, the results tend more and more to be uniformly acid with phenolphthaleine, but the *degree* of acidity varies greatly, and is most marked in case of general paralysis.

Dr. A. Connal (11), testing the reaction to phenolphthaleine of the fluid in infective diseases of the meninges, found an *alkaline* reaction in all. He states that normal fluid possessed the highest and turbid fluid the lowest degree, and lessened alkalinity was found to coincide with disappearance of the dextrose (copper-reducing substance) normally present. Boiling a turbid fluid with Fehling invariably failed to reduce the copper, and this absence of reduction was further associated with the presence of lactates as tested for by Uffelmann's reagent.

I tested some of my cases for lactic acid by Uffelmann's reagent, using 5 c.c. and counting the number of drops of fluid required to decolourise it, and I found in four cases of general paralysis from 30 to 45 drops were needed, in two epileptics 40 and 42 respectively, in one case of acute delirium (with enteric) only 25 and in one alcoholic case no less than 90 drops. After death the decolourising power rapidly increases, so that 12 or 13 drops are sufficient. And also after death, as I pointed out fifteen years ago, the copper-reducing substance rapidly disappears from the fluid.

##### 5. *Copper-reducing Substance.*

This substance, which at different times has been asserted to be sugar, pyro-catechin, dextrose, one of the purin bases, and recently, by Dr. G. S. Williamson (12), glucosamine, the reducing body of mucus, was tested for with Fehling's solution in 73 cases (58 in this series and 15 in my first series fifteen years ago). During life it was only found to be absent on two occasions, and both of these were in advanced general paralytics.

These results do not coincide very closely with Williamson's, who found it to be absent in 14 out of 22 general paralytics, and he stated that the reaction is as constantly absent in the early as in the late stages.

In 51 cases the amount of copper reduced was estimated quantitatively, and it was found that the amount was least in general paralysis and greatest in alcoholic insanity.

Thus in 21 general paralytics it averaged 16.4 (in 10 c.c. of fluid); in 7 epileptics, 19.0; in 10 (unclassified), 19.8; in 6 cases of dementia præcox, 21.3; in 5 of alcoholic insanity, 22.2 mgrm.

The rapid disappearance of this substance after death is striking, and, so far as my experience goes, constant; for example, in a male general paralytic in whom during life it was abundant, it was entirely absent eight and a half hours after death, which occurred sixteen days after it had been tested for during life. In another, where during life 10 c.c. of fluid reduced 22 mgrm. of copper, it was absent thirteen and a half hours after death, which occurred fourteen days after the first examination.

In another, where during life 10 c.c. reduced 15 mgrm. of copper, it was absent seventeen hours after death, seven weeks later. In two cases of dementia præcox of the katatonic form, where during life it was present, it was found to be absent after death, which occurred eight days later in one case and five days in the other.

In one case where the fluid was tested only four hours after death a slight amount was present; probably in this case a long enough time after death had not elapsed for all of it to be got rid of.

J. H. Coriat (13) found it in 9 out of 29 cases in the *post-mortem* fluid, but in the account from which I take this information no mention is made of the time after death that the fluid was tested. Probably, as A. Connal points out, this disappearance of reducing substance is due to, or at least associated with, the presence of lactates in the fluid, for after death, if one may trust the Uffelmann reagent, the amount of lactic acid rapidly increases. To give an example, one case in which during life thirty drops of fluid were required to decolorise 5 c.c. of the reagent only required thirteen drops one hour after death, which occurred two days later (3).

## 6.

I will just briefly touch upon some of the interesting features noticed in the cases other than general paralysis or cerebral syphilis which were examined.

*A. Dementia Præcox.*

The fluid was examined in 12 cases (4 hebephrenics, 7 katonics and 1 paranoïdal), and all gave a negative result with the Ross and Jones test. Two gave a slight lymphocytosis, 4.5 per c.mm. and 9.9 respectively. Two of the subjects had had syphilis. In one of these, infected two years ago and under treatment in the asylum, but not during the last nine or ten months, the Noguchi reaction was positive; in the other, infected six years ago and treated for a year (according to her own account), the Noguchi reaction was not tried.

In several of the cases the fluid came away rapidly, in nearly confluent drops, and in one of these cases, a woman in a stuporose condition, there was a marked mental improvement a few hours after the puncture. She had been subject to stuporose attacks with lucid intervals for some years, but latterly the attacks had become much longer and the lucid intervals very short. The improvement after the tapping, however, lasted for six months. She then again relapsed and was again tapped and 13 c.c. of fluid removed (on the previous occasion 20 c.c. were taken). Two days later she emerged from her stuporose state and became cheerful and communicative, but this improvement coincided with a short attack of subacute rheumatism and only lasted two days.

In another case which had been persistently stuporose for nearly two years no improvement followed the withdrawal of 20 c.c. of fluid. In this case the fluid came away slowly.

*B. Epilepsy.*

Four men and four women were punctured; all the women and at least three of the men were imbeciles. The only points to which notice need be directed are that in one case suffering from tertiary syphilis with destruction of soft palate (not under treatment) a positive reaction was obtained with Noguchi's



reagent, a negative with ammonium sulphate; and in two cases there was a rather high protein content, 1.5 degrees in one (the syphilitic case) and 1.7 in the other.

### *c. Alcoholic Insanity.*

The fluid from seven women (all examples of polyneuritic psychosis) and one man (a doubtful or impure case) was examined. Beyond the fact that the copper-reducing substance in two was present in large amount (and it is worth noting that in both of these the reaction to phenolphthaleine was alkaline) it presented normal characters, gave negative protein reactions and contained no excess of cells.

In six of the women the puncture was made shortly after admission to the asylum, and during an early stage of the disease; the remaining case had been an inmate for three years.

In early stages it is often impossible, apart from an examination of the cerebro-spinal fluid, to make a positive diagnosis between this disease and general paralysis. In these doubtful cases the information obtained from the examination of the spinal fluid is invaluable, and permits a positive diagnosis being given—a matter often of the greatest practical utility.

It should, however, be noted that Nissl (14) cites two cases of *chronic alcoholism* with positive cytological result.

### *After-Effects of Lumbar Puncture.*

Nissl (14), in 1904, pointed out that even after the withdrawal of only a few c.c. of the fluid, symptoms similar to sea-sickness were frequently met with—headache, nausea, vomiting, pains in back and neck, and a feeling of apathy—which occurred only after five to six hours, and were not experienced in the recumbent position. They lasted from one to eight days, but no permanent damage, according to him, resulted.

Several of my cases complained of similar symptoms, together with a feeling of constriction about the chest, but in all these symptoms were slight and transient, and no permanent ill-effects have followed the operation.

*Summary.*

The main points of practical interest in the examination of the cerebro-spinal fluid are the protein reactions and the cell-count. Both are of great value for the early diagnosis of general paralysis, tabes, or cerebral syphilis.

The simplicity of the Ross and Jones test brings it within the reach of any qualified man, and it would appear to be the most delicate of all the protein reactions.

So far as I know this series is the largest in which the reaction has been tested. Ross and Jones only tested 27, and Amsden 36 cases.

At the present time the other characters noted, the acidity or alkalinity and the presence of copper-reducing substance, are mainly of academic interest. It is probable, however, that the degree of acidity to phenolphthaleine may coincide with the development of lactic acid in the fluid during life, and this with the disappearance or lessening of the copper reducing substance; so that inasmuch as lactic acid is rapidly formed in dying nervous tissue, we may have here the means of establishing a test as to the extent of the organic nervous changes in any given case.

Writings on the subject of the spinal fluid are now so numerous that some apology is almost needed for adding to their number, especially when, as in my case, nothing new is recorded. Still, I felt it was worth while further testing the trustworthiness of such a simple reaction as that described by Ross and Jones, by its application to a larger number of cases than has hitherto been done, and from my results it appears to come successfully out of the ordeal.

*Note Concerning Cadaveric Cerebro-spinal Fluid.*

Smith and Chandler (2) state that fluid from bodies kept in the cold room (at Claybury) is as clear and limpid as in life. I have, however, always found that when the corpse remains at ordinary temperature, even in winter, the fluid becomes turbid and quite unsuitable for the Ross-Jones test a very few hours after death, and at the same time it is found to contain very many large, ill-defined cells—as many as four hundred or more per c.mm. For example, in two cases of dementia præcox, in

neither of which the fluid contained any cells during life, they were found in very large numbers after death, which occurred six and eight days later respectively.

(<sup>1</sup>) A paper read at the Quarterly Meeting, held in London May 24th, 1910.—  
 (<sup>2</sup>) Care should be taken to ascertain by a standard 1 c.c. pipette that the markings on the tube are correct. I had to discard several of my findings in earlier cases from not paying attention to this point, for very considerable inaccuracies were found in the markings on the tubes which had been used.—(<sup>3</sup>) This only applies to fluid removed from a cadaver. Fluid taken during life does not alter in respect to its decolourising power on Uffelmann's reagent however long it is kept, provided it remains undecomposed.

## REFERENCES.

- (1) Ross, S. W., and Jones, E.—*Brit. Med. Journ.*, May 8th, 1909.
- (2) Henderson Smith, J., and Chandler, J. P.—*Idem.*, July 24th, 1909.
- (3) Amsden, G. S.—*New York Med. Journ.*, February 26th, 1910.
- (4) Joffroy and Mercier.—*Journ. of Ment. Path.*, 1902.
- (5) Frenkel, H. S.—*Monats. f. Psych. u. Nerv.*, 1904.
- (6) Jones, E.—*Review of Neur. and Psych.*, 1907.
- (7) Pappenheim.—*Zeitschr. f. Heilk.*, 1907.
- (8) Turner, J.—*Brit. Med. Journ.* 1896.
- (9) Purves Stewart.—*Edin. Med. Journ.*, 1906.
- (10) Flashman, J. Froude, and Butler, A. Graham.—*Brit. Med. Journ.*, October 9th, 1909.
- (11) Connal, A.—*Quart. Journ. of Med.*, iii, 1910.
- (12) Williamson, G. S.—*Journal of Mental Science*, October, 1909.
- (13) Coriat, J. H.—*Amer. Journ. of Insanity*, 1904.
- (14) Nissl.—*Centralbl. f. Nerv. u. Psychol.*, 1904.

## DISCUSSION,

At the Quarterly Meeting held in London on May 24th, 1910.

The PRESIDENT thanked Dr. Turner on behalf of the meeting for his paper, which he regarded as of extreme value.

Dr. HUBERT BOND said he could quite corroborate the statement with regard to the ease with which the test was applied. At Long Grove Asylum they had recently been using it. He hoped to hear of some equally ready test to reveal cases which at some period of their lives had had syphilis. The Wassermann test was difficult, could only be done in certain laboratories, and by those trained in the technique. While the test described by Dr. Turner was easy and within the scope of all asylums, it would seem that it yielded information only with regard to syphilis of the nervous system. Whereas, bearing in mind the vitiating power of syphilis on the system generally, it becomes more and more of importance to be able to say definitely how many of our asylum cases have at some time contracted the disorder.

### Clinical Notes and Cases.

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*A Clinical Note.*<sup>(1)</sup> By NORMAN LAVERS, M.D., Medical Superintendent, Bailbrook House, Bath.

This is a note of a somewhat unusual case which seems to me of sufficient interest to be described in some detail.

The early history is of importance in its bearing on the later mental phases shown by the patient. The lady, Mrs. K—, was left an orphan (the youngest of four) at an early age, her father dying of some chronic form of nervous disease and her mother of phthisis; a sister and two brothers have strong neurotic tendencies, and are rather flighty and unstable mentally. She was looked upon by her brothers and sister as the strong one of the family, and hence if any unpleasant duty cropped up, it fell as a matter of course upon her shoulders, and being shy and reserved she preferred to support it rather than cause any fuss. At school she was under a lady whose only fault was that her active mentality, her strong and vivid personality did not allow much initiative to her pupils and assistant. From school the patient went to a well-known ladies' college, where she held a teaching post for some years, under another eminent educationalist, who was essentially the ruler of her own domain and kept a remarkably firm hand on the reins of office, exercising a powerful influence on the members of her staff, which caused them to merge to some extent their individuality in hers and to defer to her in an unusually thorough manner.

Whilst at college the patient had to get through an enormous amount of work in preparing various subjects for teaching, and was also responsible for a nephew whose parents were abroad. The strain proved too much and a break-down followed, characterised by listlessness and apathy, and inability to concentrate the attention except for short intervals, when a feverish mental activity took place without much tangible result.

There was also considerable loss of memory for recent events, and inability to perform everyday actions such as writing, needlework, etc. Under treatment a certain amount of improvement set in, and she went abroad with the idea of taking a year's quiet travelling and rest. The improvement was maintained, and shortly afterwards she married and settled down abroad.

Shortly after her marriage she had what was diagnosed as a heat-stroke, and after six weeks' complete unconsciousness suddenly came to herself, when she was found to be hemiplegic on the right side, with loss of control of her bladder and rectum, and an exaggeration of her former mental symptoms. Speech was not affected. Since then her mental and physical condition has remained about the same, with some very brief intervals of comparative improvement, for occasionally she has walked fairly well and taken an interest in her daily life for a few brief hours, but generally has been very helpless, without ability to do more



than shuffle along at a snail's pace by the aid of a stick and the articles of furniture, and has displayed considerable apparent dementia.

During about five years she has had many doctors and a great variety of treatment, including rest, over-feeding, massage, electricity, etc., separately and in combination. Her husband has endeavoured to save her all mental and physical effort, and, living abroad, she has been surrounded by native servants who have relieved her of all necessity for doing anything.

When I saw her a few weeks ago, the patient complained of general weakness, inability to walk or to balance herself, incapacity for work or occupation, however light, a feeling of heaviness in the right leg and foot, the necessity for attending to the calls of nature immediately the desire was felt and difficulty in remembering things of ordinary occurrence.

Her age was 35, the stature short, the body poorly developed but fairly nourished, some slight spinal curvature of long standing; glasses were worn for myopic astigmatism. The gait was slow and unsteady with feet wide apart, the right foot being swung outwards as it was brought forward, and usually there was no progress without support.

There was no facial paralysis or inequality; the tongue was protruded medially and was steady.

The respiratory system was normal.

The cardiac rhythm was good and there were no adventitious sounds: the pulse in the right upper and lower extremities was not quite so strong as on the left side, and these were distinctly colder to the touch.

With regard to the alimentary system there was occasional vomiting, generally traceable to dietetic error, and there was precipitate defæcation.

The renal system showed no abnormality other than precipitate micturition.

The menstrual epochs were normal.

The muscular system generally was soft and flabby, but there was no wasting anywhere which could not be accounted for by dis-use; there was some rigidity of right lower leg, which practically disappeared when the patient's attention was occupied elsewhere; the action of the right leg muscles was feeble, but could with care be elicited. The grip of the two hands was good and practically equal. I am not satisfied with the electrical tests so far made, which show a weak response generally but no reaction of degeneration.

The knee-jerks were decidedly brisk, the left greater than the right; ankle clonus was easily elicited on the right side but could not be obtained on the left; no planter reflex, either flexor or extensor, could be obtained on either side. Common sensation and pain and temperature sense were normal, except that response was somewhat slow on both sides; there was impairment of muscle sense in both lower extremities and patient was unable to stand with eyes shut. Co-ordination was very fair in upper extremities but the movements were rather hesitating in character; there was no intention or other tremor. There were no trophic changes.

An operation for strabismus had been performed in childhood on the right side: the pupils were equal and reacted briskly to light and accommodation; there was no nystagmus. The right fundus was pale and the vessels small, the condition being suggestive of old neuritis, but as suit-

able glasses gave  $\frac{5}{6}$  vision in that eye and  $\frac{5}{6}$  in the left, it would seem scarcely proper to condemn the eye in view of the very fair vision persisting.

There were no hysterical points.

The mental condition varies: at her best the patient is bright and cheerful and will converse readily and freely, but shows a lack of will-power and initiative, some confusion of ideas, impairment of memory for recent events, considerable morbid self-consciousness, little self-reliance, inability to fix her attention for any length of time, and is unduly sensitive as to what she imagines other people may be thinking of her. At her worst all these phases are much accentuated; her attention cannot be fixed at all, there is great confusion of ideas, almost complete loss of memory for recent and marked impairment of that for long past events. She cannot find her way about the house, and so far as her thoughts can be gauged appears to be entirely occupied with herself and other people's opinion of her. There are no apparent delusions, hallucinations, or illusions.

Her physical condition varies with the mental: at times she can walk fairly briskly for a few steps without assistance until she begins to think how well she is doing, when her powers suddenly fail, and for a time she has fair control of her sphincters; at other times she can but hobble slowly with assistance, and at her worst she seems incapable of conscious effort or movement, and will pass urine and fæces under her. Physical fatigue markedly accentuates the symptoms.

Her history during the past five years appears to have been a series of these undulations, and, according to those who know her, her condition, since the so-called heat stroke, has not become progressively worse or better, but the general level has remained about the same.

It is noteworthy that if she can be interested in conversation or otherwise she appears to be better physically, to walk better, etc., but as soon as her attention wanders it becomes concentrated on herself, and her symptoms are exaggerated.

This necessarily brief and sketchy description will not in all probability convey a very definite picture, but that is just my difficulty. The signs and symptoms are so vague and contradictory that I am unable to weld them into a clinical entity, and therefore, without taking up your time in a discussion of the differential diagnosis, I will confess that I am forced to relegate them, in my own mind, to that limbo of the imperfectly understood—the functional disorders. There is, no doubt, a certain amount of organic mischief, but it seems to me that on this somewhat slender foundation a great superstructure of functional trouble has been raised. It would appear that many actions whose boundaries should normally be within the subconscious area have, by continued introspection and self-centred concentration, been raised until they can be carried out only by the aid of conscious attention, with the natural result that they are performed less well, and at a greater cost of fatigue and strain.

Her history shows that from childhood the patient has had an environment which tended in any direction rather than towards strengthening her will-power, self-reliance and initiative, whilst her life abroad removed all necessity for active mental effort, even that usually

called for in household management. There, too, she was at frequent intervals left alone with nobody about her but native servants, and with little to occupy her thoughts.

Treatment has been intermittent and various, and most methods have been tried at one time or another. The lines I am following at present aim at improving the general physical tone by graduated exercises and tonics, and seek to restore a proper balance by repeated systemised suggestions directed towards improving the patient's will-power, diverting her attention into extraneous channels and relegating the disordered functions to their proper sphere. A case of so chronic a nature is not the most favourable for treatment by suggestive methods, and I am unable to speak yet of results, but it seems to me that these methods hold out the only hope of improvement, and it is at least encouraging that the patient is sleeping much better, that for days at a time she has no trouble with her sphincters, that she has taken to reading and needlework with considerable zest, that she has recently written several long and perfectly connected letters (the first for some years), that she can join intelligently in conversation and that she walked up the drive here in eight minutes without assistance, whilst her husband says that it is quite pleasurable again to see her and be in her society. This may be a temporary improvement, and I feel the necessity for caution in expressing an opinion, but at any rate it encourages one to persevere.

(<sup>1</sup>) A paper read at the Spring Meeting of the South-Western Division held at Bailbrook House, Bath, April 29th, 1910.

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*Notes on a Case of Hysteria.* By J. E. MIDDLEMISS,  
M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer,  
Gartloch Mental Hospital.

THE subject of the following notes was admitted to Gartloch Hospital on March 19th, 1910. He was *æt.* 18 at that time and his physical condition on admission was described as follows: "He was clean, and in 'fair' physical condition. There were old scars to be seen in the right groin and on the inner side of the right thigh, and also a scar on the scalp, near the crown of the head. The pupils were unequal and there was an internal strabismus. The pulse was slow (56 per minute), irregular, and dicrotic. The tendon reflexes were exaggerated. There were no signs of disease otherwise, except a small sinus in the right submaxillary region and an enlarged gland behind the right ear." (These have both disappeared in the interval.)

Mentally, he was fairly bright and intelligent, and able to answer questions and give a rational account of himself. He said that his fits dated from the time of an accident which occurred about a year and a half ago, and in which he injured his head. He described all this in detail—the nature of the accident and the full circumstances of the same. His memory did not seem to be impaired at all, and although he has had several fits since admission, they do not seem to have affected him at all mentally. An interesting fact is that a sister seems to be affected

by what, from patient's description, appear to be attacks of "petit mal." He also said that he experienced no aura prior to the onset of the fits.

From now onwards until April 23rd (1909) there is nothing noteworthy to record, except that patient had fits which were regarded by those who saw them as typical "grand mal" seizures. About the date mentioned, however, Dr. Parker happened to see him during a fit which struck him as being suspiciously like hysteria in character. About a week later he began to have fits in a rapid series, having as many as twenty to forty fits within three hours or so. Altogether from April 30th to May 5th inclusive (*i.e.*, six days) he had 202 fits, having them in interrupted series, the shortest interval between two successive fits being about five minutes. He was given various medicaments, including chloral and digitalis *per rectum*, morphine hypodermically, and chloroform inhalations, and had intervals of upwards of seven and eight hours between the different series. Between the series of fits he seemed to be sometimes in a state of altered consciousness and sometimes fully conscious; the fits themselves were an excellent imitation of the "grand mal" type of seizure, except that the stages were shortened and telescoped into one another, as it were. Moreover, it struck me that they were influenced in one way or another by the presence of the doctor, sometimes being started, sometimes inhibited, if the doctor happened to be near. Most striking of all were the slight after-effects of the fits, inasmuch as even after six days of them he seemed little the worse, and recovered consciousness enough to sit up in bed and ask for something to eat. This, in conjunction with the fact that on examination he was found to be anæsthetic all over the body except for two small areas of skin, led us to conclude that the fits were probably hysterical in character. Since then and up to the present time (March, 1910) he has been treated on ordinary hygienic lines, and has had practically no medicine. For the last ten months he has averaged about eight or nine fits per month, excepting for one short relapse in February of this year. About September, 1909, I began a series of experiments with the object of ascertaining, in the first place, whether I could influence him hypnotically at all, and if so, whether, in the second place, it could be used as a means of cure. From the first I found him very impressionable. My early experiments were quite simple, and consisted in "sending him to sleep" and ordering him to waken at a certain time, the time chosen being as a rule not the hour or the quarter, but such times as 10.35, 11.27, say, so that he might not be assisted by a clock in the next room. He was sleeping at the time in a side room off the ward, which room contained no clock or watch, and the door of which was closed. He was to get up, go into the ward, and report himself to the nurse in charge, who noted down the time of rising. The latter, it need hardly be said, was never informed as to the time of rising. In the great majority of cases he rose and reported himself exactly to the minute, with an accuracy which was as amusing as it was astounding. Occasionally he was wrong in the time, but he never failed to waken, even when he was incorrect in the time. Later he was given orders during hypnosis which he was to carry out later. The longest period after which he carried out such an order was fourteen days. This order he performed within five minutes of the time arranged, and it is remarkable that the



nurse who was concerned had herself forgotten all about the order in the interval. As his memory was ordinarily not at all reliable, it occurred to me that his daily duties might be more forcibly impressed upon his mind whilst in the hypnotic state, so I gave him instructions to carry out certain ward work every day or every week as the case might be, and he has since performed these duties with uninterrupted regularity. On several occasions, too, it has been suggested to him during "sleep" that he would not want his soup or his porridge, etc., next day, or would miss a meal altogether. This experiment has never failed; moreover, he has given a natural explanation for his abstention, has retained no memory of my share in the business, but has merely said that he was not hungry, even though the particular dish omitted was a favourite one. The nurses on these occasions, not being forewarned, were naturally astonished at his behaviour. More recently I have tried to induce a deep and prolonged "sleep," and on one occasion he slept sixteen hours continuously, and on another seventeen and a half hours, with two slight intermissions which were both according to order. I have remarked that on waking he would generally have no recollection of an order given during sleep until such time as he was to carry it out, but if "put to sleep" again in the interval he was shown to remember it perfectly, the injunction lying latent, as it were, in his mind until wanted. On the whole, however, I have tried to avoid giving the patient any commands of a bizarre or melodramatic nature, partly because I could not do it with conviction, and partly because it served no obvious good and might quite possibly even be harmful. Even the fact that he was suggestible at all was a mere chance discovery, and the ideal to be aimed at in such a case would seem to be the utilising of this suggestibility as an aid to recovery. For instance, it would seem advisable to suggest to such a patient that he would in future control his feelings better, and that he would not be upset by trifling incidents. Then, after he had attained a certain degree of control and mental composure his own intelligence might be enlisted in the service. He might be taught a trade and shown how to employ his mind in wholesome and salutary ways, especially of a routine and unexciting nature. In course of time the excessive emotional reaction to ordinary and every-day stimuli might become lessened, and the emotions themselves come to occupy a less important rôle in the mental life of the patient. In such a treatment and in such a training it is obvious that a good deal depends upon the original mental endowment of the patient, and unless he is intelligent enough to have some insight into his own condition, or, at least, to understand and appreciate one's instructions, the degree of improvement must necessarily be limited.

As bearing upon Freud's theory that hysteria is generally the outcome of a suppressed emotion, or an emotional shock which often remains latent, it is interesting to record that this patient, during his states of altered consciousness, almost invariably reverts to some painful incidents which occurred before he came here, and the drama and dialogue of which he re-enacts before one's eyes. What bearing these incidents have upon his present condition I am not in a position to say at present, but the facts are, at least, suggestive.

As regards the particular method employed to induce hypnosis in the case of our patient, on the first occasion he was asked to gaze at my two fingers held a little in front of and above his eye-level. Soon his eyes tired and began to water. I then closed his eyes and told him to think of sleep; I meanwhile continued to stroke the forehead and press the temples until the breathing became regular and he appeared to be in a condition resembling sleep. After speaking to him a little I ordered him to open his eyes and to waken up, which he did, merely remarking in response to questions that he had felt sleepy and was now feeling a little dizzy. From this time onwards much the same method was employed, except that I told him to close his eyes almost immediately. At this stage of the proceedings he seemed to be merely in a natural sleep, so much so that if spoken to by name he opened his eyes and appeared to wake. To prevent this he was told "to stop asleep" and merely to pay attention to what I said. Moreover, before he could be brought "*en rapport*" with me, there was a distinctly perceptible start, as if he were emerging from one state of consciousness and passing into another, the first one being more like a natural sleep and the second being the true hypnoid state, or, at least, state of heightened suggestibility. As a rule there was complete amnesia during the "sleep," and he was unable to narrate what had occurred during the time, and this applied whether he had been ordered to forget or not. Usually, however, he was told that he would not have any recollection of the events which had taken place during sleep. On the occasions when he was given a post-hypnotic command to carry out, he was repeatedly tested in the interim to see whether he had any recollection of the same, and whereas he could not remember anything of it in the waking state, he had no difficulty whatever in recalling it during the hypnotic state. Then, when the time arrived to carry out such a post-hypnotic command, which was always arranged for some definite time, there was a perceptible change in his demeanour, and although he might not at the moment be within reach of a clock, he would exhibit a certain amount of uneasiness, and in a manner a little hurried and "*égaré*" and as though his memory had had a sudden jolt, he would proceed to carry out the order, as if conscious of an important commission which must be performed immediately. In order to avoid as far as possible all voluntary deceit on the part of the patient as well as complicity on the part of observers I have performed these experiments over and over again; I have also employed numerous assistants whose *bonâ fides* were unquestionable, and have purposely laid traps in order to test whether I was myself being deceived, all this partly because of the very obvious fallacies which might arise in a case of this description, and partly in obedience to that principle of scientific scepticism which should regulate all observations, however matter-of-fact and plain-sailing they may appear to be. Meanwhile the patient's mental health has improved considerably during the last five months, and he has gradually come to be the most useful and reliable patient in the ward. His fits are now few and far between and are treated very lightly. There has, however, been one break-back, referred to above, during which he had a number of fits and was quite inaccessible for the time being to any purely mental treatment. This relapse I attribute to a

public performance which he gave in the asylum recreation hall and which excited him very much. When he recovered he had no recollection of what had transpired during the breakdown, but later on whilst in the hypnotic state he recalled the circumstances. Finally, I would like to take this opportunity of thanking Dr. W. G. Parker for permission to publish these notes, and for his kindness and help during their compilation.

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*Notes on Four Cases of Huntington's Chorea.* By RICHARD EAGER, M.B., Ch.B.Aberd., Senior Assistant Medical Officer, and J. R. PERDRAU, M.B., B.S.Lond., Junior Assistant Medical Officer, Devon County Asylum.

OWING to the comparative rarity of this disease a short account of the following cases admitted into the Devon County Asylum might prove interesting.

CASE 1.—W. C—, male, æt. 35 on admission in 1882. Mother suffered from chorea accompanied by mental derangement during the latter part of her life. A brother, who died recently, also showed the same symptoms for several years before death at the age of 61.

On admission the most prominent symptoms were partial loss of memory and general mental inactivity with auditory hallucinations. The speech was slow, and was described as characteristic of general paralysis of the insane. The pupils were unequal, and he had fibrillary tremors of tongue and facial muscles. Gait unsteady. Heart-sounds normal.

The notes in the case-books until 1892 only record increasing dementia. In 1892 there is a note to the effect that his facial muscles were always twitching, and that he was very obstinate. In 1899 the notes are: "Very demented and obstinate, shows loss of attention and memory, and is inclined to be very irritable at times." Four months before death, which occurred last February, he was found to be always twisting himself about and constantly passing his hands in front of his face the movements being involuntary, irregular, slow, of small range and affecting the whole body. Knee-jerks exaggerated. Mental condition was one of profound dementia. No other signs or symptoms beyond those recorded above. He developed lobar pneumonia last February and died.

A *post-mortem* examination was held. The skull was thin and soft, and the membranes much thickened and adherent to each other. The pia was firmly adherent to the cortex, especially along the upper and anterior part of the margins of the great longitudinal fissure, where marked decortication was present. No further notes were made of the gross lesions of the brain, as it was kept whole for microscopical examination, as were the spinal cord and portions of various nerves. The general external appearance of the brain was very suggestive of general paralysis of the insane. The lower lobe of the left lung was in a stage of grey hepatitis, and the lower and middle lobes on the

right side of red hepatisation. The rest of the *post-mortem* showed nothing of interest.

CASE 2.—M. A—, female, æt. 45 on admission in April, 1903. Family history same as in Case 4, whose sister she is. Has led a very loose life, and is stated to have been very intemperate. No details of personal history anterior to October, 1902, could be obtained. She is reported to have been excitable and impulsive then.

On admission she was garrulous and complained without cause of bad treatment at the workhouse, whilst her memory for recent events was impaired. Since admission she is reported as a very quarrelsome patient. She has expressed delusions of having been promised work outside, and on that account has made frequent requests for her discharge. Her mental condition has been slowly progressing towards dementia. She is now disorientated as regards time and place, and is inclined to be wet and dirty in her habits. Perception good, but power of attention poor.

Up to this year there are no notes to the effect that she had any involuntary movements, but the matron, who has known her since her admission, says, though not present on admission, they came on gradually and were much worse two years ago than now. The movements are slow, involuntary, of very small range and affect the whole body. They are most marked in the face and neck, and sometimes affect the hands in the form of athetosis. The tendency to pick up objects with the thumb and index finger, to the exclusion of the other fingers, is not so marked as in the other cases, but still is noticeable. The tongue cannot be kept still when protruded. The gait is unsteady, and she tends to bear to either side when walking. Nothing abnormal was found in the fundus of either eye.

CASE 3.—J. V—, female, æt. 47 on admission in November, 1907. Her father and paternal grandmother and great-grandmother suffered from chorea. In the father the disease started at the age of 37, and he died at 57. Grandmother died at the age of 70. They were all subject to great irritability of temper, but not of sufficient gravity to necessitate asylum treatment.

The patient has suffered from chorea since she was 33 years old. Until then she was bright, and held good situations, and the symptoms were stated on admission to have been coming on for one month.

On admission she was conscious, had delusions of grandeur, *e.g.*, called the asylum a castle, and herself and the nurse, queens. Perception good, some ideational inertia, attention difficult to attract; chatters incoherently, and is very irritable, obstinate and violent at times. Irregular, involuntary movements are present affecting the whole body, and are increased during excitement. The movements are slow, and of a twisting, eel-like character, and are most marked in the arms, neck and face. No tremors in tongue. Movements cease during sleep, but are present in a mild form in a half-sleeping state. Speech slow and halting, with some syllabic stumbling. Gait reeling and unsteady. Holds articles between thumb and index-finger. Knee-jerks equal and exaggerated. Pupils equal, small, and react to light and accommodation. Heart-sounds normal. Has slight optic neuritis, especially in right eye. She was treated without success



with arsenic, and the disease has run a chronic course since admission. She still has delusions of grandeur, and is very impulsive, and shows signs of advancing dementia.

CASE 4.—H. V—, male, æt. 48 on admission in March, 1910. Father died at the age of 72, after suffering for several years from chorea and mental enfeeblement. One sister is M. A—, Case 2. Has had gonorrhœa, and was in the Army. He has been in and out of the workhouse for the past four years, during which time the most conspicuous symptoms have been marked choreiform movements and great irritability of temper, leading to acts of violence at times. Symptoms have been getting worse. On admission he was quiet, but irritable. Gives a good account of his past life, but his memory for recent events is bad. Speech slow and halting through lack of control over the movements of the tongue. Perception and attention unimpaired. Is inclined to be grandiose. Choreiform movements affect the whole body, and are of a twisting character. The muscles mostly affected, are those of the trunk, neck and limbs. Facial muscles but slightly affected. The grosser movements of the tongue are impaired, but no fibrillary tremors are present. Handwriting almost illegible. Has a tendency to use thumb and forefinger to the exclusion of the other fingers. Gait waddling, the adductor muscles being especially affected. Pupils unequal, left being larger than right in subdued light, but they contract to the same extent in a bright light. Knee-jerks equal and brisk. Plantar reflex flexor. Skin-reflexes normal. Heart-sounds normal.

He has not been so irritable since admission, but the movements are as pronounced now as they were three months ago.

The diagnosis in all four cases was based on—heredity, age at onset, the presence and peculiar character of the choreiform movements, their irritability with progressive dementia and various physical signs resembling those of general paralysis.

They were all of the working class and belonged to Devonshire. No inter-relation could be traced between the three families, and it was found impossible to obtain more information of their family history than has been recorded above. No history of a sudden onset was obtained in any of these cases. The movements were involuntary and irregular, Case 2 showing a tendency to repeat the same movements at times. In Cases 3 and 4 the movements could be stopped voluntarily for not more than a fraction of a minute. Case 2 has shown a tendency at times to lose control over the sphincters. No gross affection of the ocular muscles was recorded in any of them, and none of them ever threatened or attempted suicide. Transmission was direct in all three families recorded. Cases 1, 2, and 4 represent the second generation as far as could be ascertained,

and have brothers and sisters who have reached middle life without being affected. Case 1 had two sons who cannot be traced. Case 3 represents the fourth generation so affected and has a healthy daughter, æt. 21. Menzies, in a paper in the *Journal of Mental Science*, 1893, records the case of a family affected for six generations, and remarks that the tendency is for the disease to die out if the other partner in marriage belongs to a healthy stock.

The close resemblance of these cases to general paralysis of the insane is remarkable not only as regards physical signs in all four and the *post-mortem* appearance of the brain in Case 1, but mentally as well, *e.g.*, delusions of grandeur. Some continental writers seem to regard the two diseases as identical, though, from the point of view of heredity only, this is most unlikely. It might be mentioned that Wassermann's reaction has not been performed on any of these cases yet.

We are indebted to Dr. Davis for permission to publish these cases.

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*Three Unusual Cases of General Paralysis.* By GUY  
R. EAST, M.B., Assistant Medical Officer, Northumberland  
County Asylum, Morpeth.

My excuse for reporting the following three cases is to draw attention to the fact that occasionally the initial attack of insanity in general paralysis does not present any of the signs and evidences of that disease, so that such cases are easily passed over and not diagnosed, no matter how carefully medical examination is conducted.

There is no doubt that such cases enable one to account for reported recoveries in general paralysis, not one of which was ever permanent where the diagnosis proved correct. In none of these three cases were there any evident signs of general paralysis present when they were first admitted, and on recovery they were discharged as "recovered." J. C— remained rational for four years, G. H— for two years, W. H— for one year.

On re-admission all three cases were readily diagnosed as general paralysis, and in two cases, where a fatal terminal occurred later, the diagnosis was confirmed by *post-mortem* examination. In one case only (G. H—) will be found gran-

diose ideas. In most text-books on mental disease great stress is laid on this phase of general paralysis. So much is this the case that one is almost led to expect them as a *sine quâ non* in this type of insanity. In my experience of general paralysis I have found that the classical ideas of grandeur are rather the exception than the rule.

G. H—, æt. 30. On admission was depressed and hypochondriacal. Stated that his head had dropped to his feet, that he was filling up with water, that I am about to administer chloroform to him preparatory to killing him, and asked for a few minutes' respite to prepare for his impending death.

He presented no signs nor evidence of general paralysis. He continued miserable and dejected for three months, always reiterating the same statements, that he was shortly to be killed or roasted alive, and that he had not long to live.

Thence onwards he began to improve mentally and bodily; he gradually rid himself of his depressing delusions and became cheerful and sociable. Employment in the open air further advanced his mental improvement. He became quite rational, and one year after admission was discharged "recovered."

On re-admission, two years later, he was wildly maniacal, continually shouting in a harsh, croaking voice, said he was the king, also Christ, that he was ninety feet high. He destroyed his mattresses, pulling out the coir in his desire to find gold, of which he stated he had an enormous quantity. He was degraded in his habits.

He was evidently suffering from general paralysis; his expression was typical: lips and tongue tremulous, with slurred and hesitating speech; pupils unequal and fixed; gait unsteady.

After remaining in this mental condition for six weeks he gradually quietened down, and was allowed out of bed. He soon regained mental and bodily vigour, and for six months was usefully employed in gardens.

The terminal scene was ushered in by a congestive attack, followed by a prolonged condition of mania, which in many respects resembled his former attack. He remained in this state during four months, when he collapsed suddenly. Thence onwards he passed into the typical condition seen in bed-ridden general paralytics. He ultimately died four and a half years after his initial attack.

W. H—, æt. 36. On admission was depressed and deluded. Stated that he could not sleep at night owing to terrifying things at his bedside, that a man followed him about and frightened him, that electric shocks were passed through his body which caused him to shiver. He frequently complained of headache. No motor signs nor evidences of general paralysis were present. For the next three months he remained very unhappy and miserable, was quite unable to indulge in useful occupation, never attempted to distract his thoughts with reading or amusements, spent most of his time holding his head in both hands, and groaning as though in great pain.

Afterwards he began to make some mental progress, and was at length persuaded to work in the flock-room, where he eventually became a

useful worker. From this time onwards the mental improvement was gradual. It took him nearly eighteen months to recover. He was finally discharged after two years as "recovered."

On re-admission, one year later, he was maniacal, restless and excited, whistled and sang frequently, gesticulated wildly, and talked incoherent nonsense. He had no idea of time or place, could not tell the day, month or year; did not know where he was. His habits were filthy. He was destructive, tearing his clothes and bedding, usually wandering about his room in a nude state. He rarely slept.

His general expression and appearance was indicative of general paralysis. Fine tremors present in lips and tongue. Both pupils were "pin-point" and fixed. His articulation was characteristic of general paralysis.

For five months he was kept continuously in bed, and during all that time was maniacal. He afterwards improved sufficiently to be allowed up, and for the next five months made himself useful, working in the wards. He had, during this period, passed into a state of terminal dementia, which was occasionally interrupted by transient attacks of mild mania. He became progressively weaker in mind and body, and died of general paralysis four and a quarter years after his initial attack of insanity.

J. C— æt. 24. On admission his mental state was one of stupor with occasional excitement. He lay in bed with arms outstretched pretending to be asleep. He paid no attention to what was said to him, except that he stated his name. He laughed to himself and made faces. At times he became restless and destructive. He broke one of the windows in his room in a fit of excitability, and frequently tore up his clothes. In this state he was markedly garrulous, talking incoherent nonsense. Stated that he had come from heaven and that he was now in the grave.

He required forcible feeding for four days.

There was no sign nor evidence in this case to lead one to suspect early general paralysis.

After a month's confinement to bed he was so much improved that he was able to work in the gardens, where he did well. His mental progress was maintained so that, nine months after admission, he was discharged "recovered."

On re-admission, four years later, he was acutely maniacal, incoherent and deluded. Stated that he was tormented by voices of men and women, that I pass electricity through him by means of my stethoscope, that his wife tried to poison him, and also attempted to cut his throat. He pointed at and addressed imaginary persons.

He had the expression and appearance of a general paralytic. His pupils were unequal, the right reacted sluggishly to light and accommodation, the left was fixed. Fibrillary twitching in lips and tongue; his speech was also affected.

In the course of one week he got over his maniacal attack, and since then has made rapid mental progress. He now talks quite rationally, is clean, tidy and industrious, being in every way satisfactory, and is already asking to be discharged.



*Photographs of Patients Suffering from Pellagra, with Well-marked Skin Rashes.* Contributed by JOHN WARNOCK, M.D., Medical Superintendent, Lunatic Asylum, Abbassia, Cairo.

FIG. 1.—This photograph shows the black indurated skin of the back of the hands and forearms after exfoliation takes place.

FIG. 2.—Well-defined “breast-plate” of white denuded skin after exfoliation of the black rash. The “breast-plate” occupies exactly the portion of the skin of the chest exposed to the sun by the fellah’s shirt, which is cut low. On the patient’s left arm the line of demarcation between the blackened skin of the forearm and the light skin of the upper arm is plainly seen. The forearm is not covered by a sleeve while the fellah works in the field. The skin of the legs and knees is seen to be blackened, also patches on the nose and cheek. The general muscular atrophy is evident.

FIG. 3.—Shows the blackened scaly skin of neck where it has been left uncovered.

FIG. 4.—Shows the blackened, thick, wrinkled, rough skin of legs of a pellagrous man.

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### Occasional Notes.

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#### *The International Committee for the Study of the Causes and Prophylaxis of Mental Disease.*

The report on the meeting of the above committee, which is published in the opening pages of this Journal, is worthy of the closest attention from all members of the Medico-Psychological Association, as affording a most important means of advancing that branch of our science which more immediately relates to preventive medicine.

Such a committee, if it becomes thoroughly organised and equipped, should speak with an authority which should command the attention of popular opinion and of the legislative bodies of all the civilised countries contributing to its



FIG. 1.

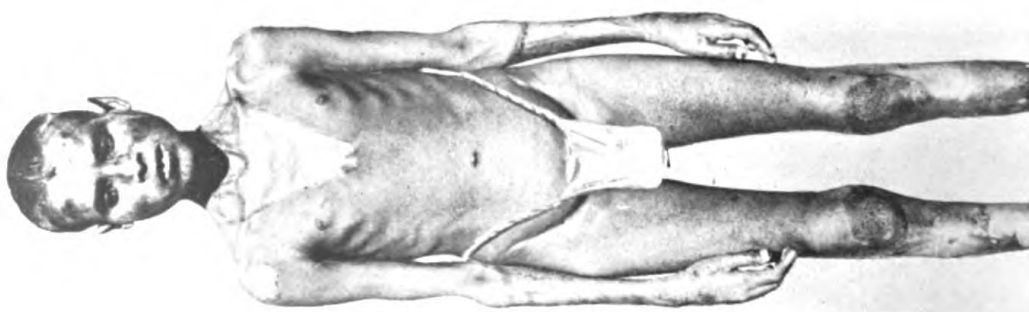


FIG. 2.

To illustrate Dr. John Warnock's contribution.

FIG. 3.

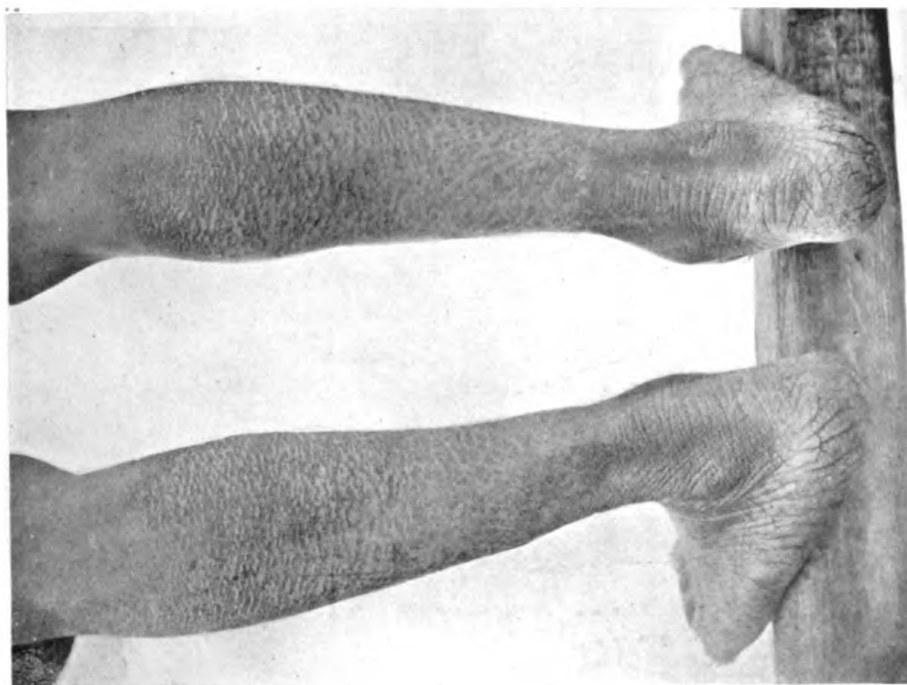


FIG. 4.

To illustrate Dr. John Warnock's contribution.





formation. Its influence on civilised communities might go far to correct many of the faults of social life, which furnish the basis for the development of mental maladies, and so become an important factor in preventive medicine.

The one thing needful to put in action the machinery that has been created is a grant of money from the governments of the various countries, and it is very desirable that the members of the Medico - Psychological Association should seize all personal opportunities of forwarding this object. The Parliamentary Committee without doubt will exercise that collective influence, the importance of which has been so recently shown in the pensions legislation. Very considerable effort, however, will be needed at the present time to obtain from the Treasury of the nation the modest sum that is required for a purpose which may exercise such an important influence on the future health of the nation.

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#### *The Asylum Workers' Association.*

The Annual Meeting of this Association was held on May 25th, under the presidency of Sir W. Collins, when a very satisfactory annual report was presented.

The report showed that the membership had largely increased during the past year, having risen from 3,025 at the end of 1908 to no less than 4,575 at the end of 1909. This is very truly attributed to the interest excited by the Asylum Officers' Superannuation Act.

The financial position remains sound, the balance at the end of the year having considerably exceeded that of the previous year. The Homes of Rest Fund has also increased, but there would seem to be room for considerable extension in this direction. Ninety pounds as the total subscription of 4,000 members does not appear to be a sum adequate to the usefulness of the object.

The report very fully recognises the services of Sir W. Collins in promoting the objects of the Association, and of Dr. Shuttleworth, who has so ably aided its development from its earliest stages. It has now reached a point in which its success, as a practical and influential body, is permanently assured.

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*Psychiatry in Russia ; from Professor Bechtereff.*

Professor Bechtereff's presidential address, at the recent Congress of Russian Psychiatrists, gave an outline of the state of lunacy in Russia which is of singular interest. He estimates that there are at least 300,000 insane persons in Russia, of whom only 30,000, or 10 *per cent.*, are cared for in institutions. The 270,000 unprovided for he describes as often kept in chains under very miserable conditions.

He considers that insanity is less frequent in uncivilised Russia, by contrasting the ratio of 1 in 450 of the population with the much higher ratio in England and other civilised countries. It may be doubted whether this conclusion is justified. The mortality of the 270,000 existing under the conditions he describes would probably be at least double that of patients treated in asylums, and this extreme waste would need a larger ratio of occurring cases to maintain the smaller proportion of existing lunacy.

Professor Bechtereff advocated the establishment of colonies and of communal supervision to deal with this vast amount of untreated misery.

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**Part II.—Reviews and Notices.**

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*A Text-Book of Mental Diseases.* By Professor EUGENIO TANZI, of Florence. Authorised translation by Dr. FORD ROBERTSON and Dr. T. C. MACKENZIE. Illustrations. Pp. xvi + 803. Demy 8vo. London: Rebman, Ltd., 1909. Price 24s. net.

This is the third great book dealing with insanity which has lately come from Italy. It is remarkable that the most advanced ideas of psychiatry have been formulated in Italy and transmitted to us mainly by the labours of Scotsmen. We hear much of our insularity, but Professor Tanzi himself is not above reproach on the score of peninsularity. In the chapter dealing with asylums, omitting reference to voluntary patients, he finds fault with the English law, which "refuses admission to those who most require care, and provides refuges instead of hospitals." He holds that psychiatry is cultivated here as a philanthropic institution and not as a science. He finds an exception in the Scottish Asylums Laboratory, to which the translators add Claybury, Manchester and Lancaster. It is not surprising, therefore, that the index of names bears no reference to Bevan-Lewis, Clouston, Crichton-Browne, Goodall and many others whose scientific work is familiar to

us. This, however, is not altogether subject for regret, as it leaves Professor Tanzi more free to deal with continental work, which is, of course, more interesting on this occasion. The translators have omitted his remarks on the administration of Italian asylums, which, unless it has been vastly improved within recent years, leaves much to be desired. The immediately fascinating and important feature of the book is the great development of clinical observations, largely under the influence of German and French models. Professor Tanzi endeavours to enlighten us on the practical measures and the attainment of the ideals of psychiatry, with a rigorous examination of facts and a hesitation in the condemnation of hypotheses.

Beginning with the seat of the psychical processes the author advances to consideration of the causes of mental diseases and the anatomical substratum concerned. The obscurity of causation as compared with the comparative simplicity of the pathology of other organs is at once insisted upon. How is it that out of an emotional experience there can be materialised an organic change? Having established the facts that the psychical processes are localised in the cerebral cortex, and that localisation of various functions have been very precisely determined, although our knowledge in this respect is still far from complete, Professor Tanzi admits that the course of thought is very precarious, and believes that the psychical centres do not contain ideas, but rather are able to produce the ingredients that serve to compose the ideas or to symbolise them. In this discussion the observations of Broca and Hitzig have not been forgotten, nor are references to Verworn, Flechsig, Cajal, Ferrari and Bianchi wanting.

Proceeding to consider the causes of insanity, they are divided into exogenous and endogenous, the former proceeding from the environment—physical, psychical or social—while the latter are connected with the individual constitution and are operative in any environment—diathetic, hereditary and degenerative.

The somatic causes are first considered, including infective processes, pellagra, etc. Psychical causes are also held capable of inducing mental diseases. The chemical importance of mental processes is not great; only the emotions generally determine the psychopathic process; they disturb the trophic mechanism which, initiated by the brain, regulates the nutrition of the tissues. The brain is injured by the reflected action of visceral disorders, and specially by the auto-toxins developed by these disorders, for the characteristic and misfortune of the cerebral cells is their special sensibility to poisons. Thus inordinate exercise unfits one for good mental work. The far-reaching results of these modern opinions must be followed out in the pages of Professor Tanzi's book. It is only possible here to give the merest indication of his position, but from these few notes it will be evident that a reasonable theory has been promulgated, that the ideas which have been in the air are now systematised and placed clearly before the profession. Similarly, it is stated that insomnia arising from worry allows toxic products to accumulate in abnormal amount.

Comparing the conditions prevailing in the north and the south of Italy, Professor Tanzi admits that the number of persons in asylums increases with culture and prosperity. The proportion in the north



varies between 25.3 and 16.9 per 10,000 inhabitants, compared with between 1.3 and 6.6 in the south, but that does not mean a relative scarcity of the insane. Alcoholism is observed to vary in the same geographical districts, from a maximum of 15.84 *per cent.* of the asylum admissions in Liguria to 0.97 in Sicily.

The continuation of this chapter on causes in respect of heredity is of deep interest, and from that Professor Tanzi goes on to discuss the anatomical substratum of mental diseases, which is adequately illustrated as regards macroscopic and microscopic details. A very interesting and important part of the book follows the anatomical section. It deals with the physiology of sensibility, ideation, memory, the sentiments, movement and will. Taking double consciousness as an example of the treatment of these subjects, it is regarded as an alternating amnesia, which is explained by the difference of the mnemonic material that consciousness has at its disposal. It is likened to the abstraction of pages from a book at random—in the ordinary state only the remaining pages would be used, whereas in the other state either the detached pages only would be used, or a reconstitution of the whole book.

Passing to classification, Professor Tanzi finds two opposing tendencies, the symptomatologists multiplying distinctions and clinical forms, and the anatomists simplifying by synthesis. Esquirol, Guislain, and Morel are noted as the precursors of Krafft-Ebing, displaced in Professor Tanzi's estimation by Kraepelin. The result is that the author pursues his subject as follows:

*Poisonings.*—Pellagra, alcoholism, etc.

*Toxic infections and auto-intoxications.*—Amentia, uræmic psychoses, thyroid psychoses, progressive paralysis.

*Encephalopathies.*—Acquired idiocy, tumours and other coarse pathological incidents.

*Affective psychoses.*—Melancholia, mania and circular insanity.

*Constitutional neuro-psychoses.*—Neurasthenia, hysteria and epilepsy.

*Dementia præcox* in the usual three forms.

*Degenerative mental anomalies.*—Sexual pervers, constitutional immorality, paranoia, intellectual feebleness (hereditary imbecility).

This classification is a distinct advance on those with which we have become familiar, but it requires explanation, which we cannot supply in brief space. The first group is definite enough, but the second opens with amentia, by which we understand idiocy in this country. The synonyms here given are: Amentia (Meynert), sensorial delirium, confusional insanity, Wahnsinn, Verwirthheit, meaning an acute psychosis, not in every case febrile, of varied origin, and characterised by a kind of mental ataxia which causes disorder of the processes of perception and ideation, and which in some instances suspends them completely, leading to unconsciousness. It is a disease of the young of normal mental development, generally ending in recovery, not uncommonly in death. Formerly it included acute mania and acute delirious mania. It is greatly to be regretted that this confusing and contradictory vocabulary of names is permitted to continue. Surely the time has arrived to make a systematic attempt at an international understanding of these names and a resolute abolition of those which are inappropriate. Amentia

plainly signifies deprivation of mind generally, and specially a deprivation dating from birth or early infancy. Sensorial delirium, in the French sense, means an insanity in which illusions or hallucinations are predominant symptoms. Confusional insanity is Griesenger's term, which excludes dementia and specialised delusions; Wahnsinn was monomania, rejected in favour of paranoia, which in turn appears to be suffering eclipse. Verwirthheit apparently remains as an equivalent, more or less exact, for confusional insanity, which is a reasonably descriptive name for a syndrome which occurs frequently enough. It is an inconvenience, a source of irritation, and a reproach to perpetuate unsuitable and equivocal names in describing those disorders. We, no doubt, arrive at the author's meaning in time, but the process is unnecessarily vexatious. If, in reality, amentia is mental ataxia (incoordination) why not call it that? But the alleged characteristic of confusional insanity is also inseparable from other forms of mental disorder.

These considerations lead us far from the immediate subject in hand. It is enough to say that Professor Tanzi's work in the great asylum of Florence has been fitly crowned with the production of a most interesting book which enhances the fame of Italian psychiatry. We are indebted to Dr. Ford Robertson and Dr. Mackenzie, and to those who have helped them in the production of this translation, which will command appreciation as a distinct advance in psychological medicine, scientific in detail and philosophical in outlook.

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*Text-book of Nervous Diseases and Psychiatry.* By CHARLES L. DANA, LL.D. Seventh edition. 264 illustrations. J. & A. Churchill, 1909. 8vo, pp. 782.

When a book reaches its seventh edition it passes beyond the range of an ordinary critical survey. It has already proved its usefulness to the profession and has become popular. Prof. Dana has revised his work, and has fulfilled his desire to make it really representative of present-day neurology. Following out his original ideal, he has added to those parts which deal with the neuron histologically, and with the anatomy and physiology of the brain. It thus becomes a useful hand-book for those who desire to keep abreast of the rapidly increasing knowledge of neurological details. A survey of the numerous and excellent illustrations is helpful even without reference to the excellent text. On the other side, psychotherapy, neurasthenia, hysteria, and psychasthenia have engaged Prof. Dana's renewed attention with excellent and practical results. He has been successful in selecting what is of present value, and in presenting the results to his many readers.

Turning to the chapter dealing with insomnia we find the memorable conclusion—that there are many sleep-producing remedies, but no good drugs available; and the further warning that many from childhood up do not get a sufficient amount of sleep. The shorter part of the book relates to psychiatry, and is of less importance than the neurological section.

*The Dissociation of a Personality: a Biographical Study in Abnormal Psychology.* By MORTON PRINCE, M.D. Boston. London: Longmans, Green & Co., 1906. 8vo, pp. 569. Price 10s. 6d. net.

This is not a little book. It is crowded with careful observations and details elucidative of the case of Miss Beauchamp, including facsimiles of her handwriting and appendices of interest. Yet Dr. Prince sends it forth as *selections* calculated to familiarise the reader with the main phenomena, which will serve as fundamental data for the consideration of the psychological problems with which he intends to complete a deeper study in another volume. His first aim has been accuracy of the observations, which he has interpreted logically from the established data of abnormal psychology. His purpose is to discuss a series of problems in another volume, including the theory of this case and dis-integrated personality in general; the subconscious under normal and abnormal conditions; hypnosis, sleep, dreams, and somnambulism; hysteria; neurasthenic states; alterations of character; hallucinations, fixed ideas, aboulia, amnesia, etc. Dr. Prince is of opinion that abnormal psychology offers a rich field for modern investigation, and submits this work as a contribution to our knowledge.

The subject of this study is a person in whom several personalities have developed; she changes in character and her memories are altered. She may be any one of three different persons—different characters. Two of these personalities have no knowledge of each other or of the third except by inference or at second-hand. Blanks, therefore, occur in memory. The splitting of personality is along intellectual and temperamental, not along ethical, lines of cleavage. The appropriate term is disintegration of personality, a functional dissociation of the normal self, not a degeneration or destruction which may be equivalent to insanity. Reference is made to similar cases studied by Pierre Janet, M. Flournoy, Prof. Hyslop, M. Azam, Hodgson, and William James. Miss Beauchamp's heredity and childhood accounts for the psychopathic soil which has permitted her present condition, which is described accurately relative to the various and varying mental phases.

It is unnecessary to follow out these lengthy studies in detail. To those who are interested in these phases as they occurred and as they are analysed the whole volume is noteworthy. And one must recognise in these cases medico-legal problems which are of real importance, so that Dr. Prince's record compels serious study.

### Part III.—Epitome.

#### Progress of Psychiatry in 1909

##### BRAZIL.

By Dr. JULIANO MOREIRA.

AN adequate review of the progress of psychiatry in Brazil during the past two or three years is not an easy task. The greatest Republic of South America is so unknown in Europe, the progress accomplished in asylum care and treatment and psychiatric instruction is so remarkable, that any statement of the facts within reasonable compass is difficult.

From another point of view, the selection of what will be of interest is a matter of some difficulty.

Having a vast area of over 8,524,000 ks., and a population of 25,000,000, the United States of Brazil offers an admirable field for the study of the comparative racial pathology of insanity.

Statistics having proved an increase of insanity, the Government has been obliged to make more extended provision for the care of the insane.

In 1903 I succeeded in obtaining from the Federal Congress some *reform of the care of lunatics in Brazil*. December 22nd saw the promulgation of the new Lunacy Law, which for the last fifteen years has been lingering in the Legislative Congress.

The law is a public guarantee against arbitrary sequestration, provides for the safe keeping of the property of patients, and gives to the medical director authority over the administration necessary for the welfare of the patients.

The federal decree No. 5,125, of February 1st, 1905, was issued giving regulations for the application of the new Lunacy Law. The law establishes that all asylums, public or private, shall have a part absolutely independent of the rest of the asylum, with a separate staff, for the reception of new cases. They are to have workrooms, and if possible a farm, for those patients who will employ themselves, also places for the isolation of the dangerous cases, those suffering from infectious diseases, and for those charged with some offence at law, the medico-legal investigation of which is proceeding.

The law permits a patient to be cared for at home. In all cases these homes are under the supervision of the commissions of vigilance, nominated by the Minister of the Interior and Justice, and constituted by the Attorney-General of the Republic, the Attorney of the Orphans, and the Medical Inspector, a reputable physician with experience in the treatment of mental and nervous diseases.

The rules establish a school for the teaching of attendants and those who aspire to these posts. No person is permitted to resort to any means of restraint without an express order written and signed by a medical officer of the asylum. There are a number of precautionary measures against the possibility of arbitrary sequestration. The new Lunacy Law has had a very beneficial effect.

The *National Hospital for the Insane* at Rio de Janeiro has been



radically remodelled. Many pavilions have been built: two pavilions for epileptics, two for contagious diseases, two with verandahs especially for the outdoor treatment of phthisis, one pavilion for idiots, two dining rooms, a very good modern kitchen, new laundry, workshops (printing office, book-binder, carpentry, blacksmith, dressmakers' shop, etc.), a new mortuary, engine-room, etc. A very good pathological laboratory equipped with all modern improvements, operating rooms, electro-therapeutical installations, and a psychiatric library have been provided. Six new bath-rooms have been equipped in the sections Pinel, Esquirol, Calmeil, Morel, Meynert, and Magnan. Hydrotherapy has been largely practised, and massage has also been found a valuable adjunct in the treatment of the several cases of acute psychoses and a trained masseur is daily employed. This form of treatment has proved of the greatest benefit in cases with defective metabolism. The out-door treatment of psychoses and tuberculosis has been continued with success.

Dr. L. da Cunha was appointed pathologist, and he undertook the purchase and equipment of the laboratory, after having visited many of the best laboratories in Germany, Vienna, and Paris, where he familiarised himself with the latest and most approved developments of modern neuro-pathology.

With my friend, Dr. Afranio Peixoto, in January, 1905, I published the first number of the *Archivos Brasileiros de Psychiatria, Neurologia, etc.* With the collaboration of the Brazilian alienists, we have already edited five volumes—a vast amount of clinical and pathological contributions to the study of the psychiatry and neurology in Brazil.

At present, the *teaching of mental science* is undertaken in the three medical faculties of Brazil—Rio de Janeiro, Bahia, and Rio Grande de Sul—by three professors and three assistants. The clinic of Rio gives opportunity for clinical instruction to the students of the medical faculty of Rio de Janeiro. The professor of psychiatry, Dr. T. Brandão, has occupied the chair for twenty-six years. The equipment of the hospital for clinical investigation is very complete, and not inferior to that of any similar institution in Europe or North America.

The asylum accommodation in Brazil comprises: *Federal district*, National Hospital for Insane (1300 beds); the Colony in Governor "Island" (300); two private institutions; of these the largest is that of Dr. C. Eiras (100 beds).

*State of S. Paulo.*—Of the states of Brazil, S. Paulo stands foremost in wealth and progress. This state has shown a great advancement in the development of its provision for the public care of the insane. The hospital colony of S. Paulo is one of the best planned and equipped institutions in the world. It is located at Juquery at a distance of rather less than an hour by rail from the city of S. Paulo. It comprises a main hospital with eight pavilions and two agricultural colonies. The plans were made by the architect, Ramos, from the suggestions of director Dr. Franco da Rocha. Dr. F. Rocha has founded at S. Paulo, family care of the insane in Juquery village with good results. Some of the other states, notably Pernambuco, Rio Grande de Sul, Pará, have institutions of some merit.

The meetings of the *Brazilian Association for Neurology, Psychiatry, and Legal Medicine* were held in Rio at the rooms of the Association.

A large number of valuable and interesting papers were read. The demonstrations of interesting cases and the discussions which followed were the most instructive part of our meetings. The subjects of hysteria, psychasthenia, infective delirium, dementia præcox, aphasia, apraxia, etc., were considered.

The year 1909 was especially distinguished in Brazil by the meeting of the *First Congress of Psychiatry, Neurology, and Legal Medicine*, a Section of the *Fourth International Latino-American Congress of Medicine*. The Congress was remarkable not only for the importance of the subjects that were dealt with, but also for the number of distinguished foreign physicians who attended from all parts of South and Central America. The number of papers presented to the Congress obliges us to be brief and merely to indicate the leading contributions. The reader who is desirous for further detail will need to refer to the *Archives Brasileiros de Psychiatria*.

*Aphasia*, Prof. Piñero (de Buenos Aires), and Peón del Valle (de Mexico); *Alcoholic Psychoses*, Prof. M. Nery (Rio), Borda, Jones and Morixe (Buenos Aires); *Sclerosis, Lateral Amyotrophica*, Prof. C. de Freitas (Rio); *Infectious Psychoses*, Prof. Austregésilo (Rio), Dr. Lamas (Montevideo); *Arterio-sclerotic Cerebritis*, Prof. Jakob (Buenos Aires), Prof. Moreira (Rio); *Epilepsy (Ætiology and Pathogeny)*, Riedel (Rio), and J. Esteves (Buenos Aires); *Dementia Præcox and Thyroidectomy*, M. Pinheiro and Riedel (Rio), and Esteves (Buenos Aires); *Clinotherapy*, Prof. Cabred (Buenos Aires); *Tumours of the Frontal Lobe in Man*, Dr. H. Roxo (Rio); *Urology of Beri-beri*, Dr. M. Rego (Rio); *Cerebro-spinal Fluid in Dementia Præcox*, Dr. A. Viegas (Rio); *Apraxia*, Dr. E. Lopes (Rio); *Medico-pedagogical Education of the Abnormal*, Dr. F. Figueira (Rio), Prof. Cabred (Buenos Aires), Dr. S. Rodrigues (Montevideo); *The Care of the Insane*, Prof. Juliano Moreira (Rio); *The Family Treatment of the Insane in S. Paulo*, Dr. Franco de Rocha; *Cerebro-spinal Fluid in Dementia Paralytica and in Dementia Præcox*, Prof. L. da Cunha and Dr. U. Vianna (Rio); *Treatment of Epilepsy*, Dr. W. Almeida (Rio); *Responsibility in Crimes of Passion*, Prof. Lima Drummond (Rio); *Medical Secrets*, Prof. Nascimento Silva (Rio); *Civil Capacity of the Aphasics*, Prof. Peón del Valle (Mexico); *The Dead after Immersion*, Dr. Alf. Andrade (Rio); *Identification in Legal Medicine*, Dr. A. Lima (Rio).

The social side of the meeting was as successful as the work, and will long remain as a pleasant memory with those who had the good fortune to be present.

Prof. Domingo Cabred, at a successful meeting of the Brazilian Association of Psychiatry, Neurology, and Legal Medicine, with lantern demonstration, showed the great progress in the care of insane in Buenos Aires.

Prof. Cabred was elected a member of our Association.

During the meeting of the International American Congress of Medicine, a visit was paid by several specialists to the National Hospital for the Insane at Rio de Janeiro.

## Epitome of Current Literature.

### 1. Physiological Psychology.

*A Psycho-analytic Study of Leonardo da Vinci* [*Eine Kindheitserinnerung des Leonardo da Vinci*]. (*Schriften zur Angewandten Seelenkunde*, H. 7, 1910.) Freud, S.

A psycho-analytic study of Leonardo, based on his youthful experiences, is rather hazardous on account of the poverty of the material extant. There is, in fact, only one statement to rely on. In one of his notes Leonardo remarks that as an infant in the cradle he remembers that a vulture alighted near him, and that its tail touched his mouth; hence, he thinks, his interest in the problem of flight. Freud questions whether this was a real experience. It recalls the infantile pseudo-remiscences which occur in hysteria and allied conditions, and frequently have reference to precocious sexual feelings. The bird and the tail are sexual symbols. Hence, being psycho-analytically interpreted, this phantasy means that Leonardo was marked by infantile sexuality of passive character, such as is sometimes produced by excessive maternal caresses. It is well known that Leonardo was an illegitimate child, who lived with his mother to the age of five, when he was taken into the house of his father, whose wife was sterile. Freud imagines that the husbandless mother lavished all her affection on the child, who reciprocated her emotions, suppressing them as he grew up, so that they became transformed into an "idealised homosexuality," and left him sexually frigid to women. As a youth, it is proved, Leonardo got into trouble, and was perhaps imprisoned, through associating with sexual invert, and he always loved to surround himself with beautiful boy pupils. There is no evidence that he had any relationship, even of friendship, with women. Freud sees his love to his mother reappearing at the age of fifty in the labour which he devoted to his portrait of Monna Lisa, whose smile (reminiscent of his mother's, says Freud) strangely haunted him, and is seen again in the Anna with her daughter Mary in her lap at the Louvre. For Freud these two women, who appear of like age, represent the artist's mother and his father's wife—his second mother. Leonardo always remained much of a child, and delighted in inventing curious toys; this is traced to the inhibition exerted by his infantile sexuality, and his inquisitiveness, which developed into profound scientific curiosity, is traced to the same source. Freud refrains from labelling Leonardo as neurotic, but considers that he revealed characters which allied him to that type.

The argument is developed at considerable length, and the author has evidently made a careful study of the authorities. He has, however, overlooked the statement—made by the almost contemporary *Anonimo Gaddiano*, and rather favourable than otherwise to Freud's argument—that Leonardo's mother was not, as he assumes, a peasant girl, but a woman "of good blood," and she afterwards married a citizen of the town of Vinci. It is easy, however, to criticise Freud's

interpretation of the statement from which he starts. Childish memories are sometimes much earlier than is commonly supposed; the very early cases are usually associated with an emotion of fright, and Leonardo's own account of the matter is entirely possible, though the big bird need not have been a vulture. Freud himself, at the end, admits that his essay may be treated as only "a psycho-analytic romance." He almost puts himself in the position of Alnaschar, who with one kick overturned the basket of eggs on which his magnificent day-dream was founded; in this case, moreover, there is only one egg in the basket. But if—to vary the simile—Freud sometimes selects a very thin thread, he seldom fails to string pearls on it, and these have their value whether the thread snaps or not.

HAVELOCK ELLIS.

*Visual Hallucinations in the Sane State* [*Hallucinations Visuelles à l'État Normal*]. (*Arch. de Psychol.*, Oct. and Dec., 1908.) Naville, E.

Prof. Naville, eminent as a philosopher and now æt. 92, here describes the hallucinations to which he has lately become subject. He first observed them during the summer of 1908, when staying at his chalet on Mont Salève (at a height of 1,200 metres). On returning to his laboratory in Geneva they reappeared after an interval, becoming still more frequent. He is in good health considering his age. Sight is also good, except for some difficulty in reading and writing; ophthalmic examination revealed no signs of disease. He is not duped by his hallucinations, though he often requires the negative evidence of other witnesses to distinguish them. They are exclusively visual, unaccompanied by any special sensations, and they cause no trouble or anxiety, but are simply an occasion of interesting study. They show no special relationship to meals or to time of day, and they appear equally in fine or dull weather.

The visions disappear as soon as the eyes are closed, and they involve no change in the natural objects surrounding them. They are usually seen from the window, at a distance of several hundred paces, and are never recognisable as actual acquaintances. They are, however, always lifelike, never fantastic, and Naville is usually able to find the germ of them in actual memories, sometimes of very ancient date. They frequently take the form of processions of men, women, or children; animals, especially sheep, and vehicles also figure in them. A kind of smoke sometimes rises from the processions. White is the prevailing colour, and nearly all the head-dresses are white.

HAVELOCK ELLIS.

*On the Nightmare.* (*Amer. Jour. of Ins.*, Jan., 1910). Jones, E.

The subject of nightmare has been almost ignored by medical writers, though there is hardly any malady which causes greater distress to the sufferer. The earlier part of this paper is devoted to an exhaustive survey of the literature of the subject.

The cardinal symptoms of the attack are shown to be: (1) Agonising dread (*angst*); (2) sense of oppression or weight at the chest which alarmingly interferes with respiration; (3) conviction of helpless paralysis.



Many hypotheses have been advanced as to the pathogenesis of the malady. Most of the causes which have been assigned only appear to play a part of varying importance in the evocation of a given attack, and there probably exists an underlying predisposition to the affection. The various theories fall into two distinct groups: on the one hand, sources of peripheral irritation which consist almost exclusively of indigestible food; on the other, mechanical sources of embarrassment to the circulation and respiration (distended stomach and constrained postures), which act by bringing about a supply to the brain of non-aërated blood.

Moreau, in 1855, and Spittgerber, in 1866, were the first to point out the insufficiency of these hypotheses, and to suggest the possibility of a psychological solution to the problem. The physical explanations are certainly inadequate to explain the predominating features of the condition, and there is a singular lack of correlation between the alleged cause and the actual attack. Observation reveals two facts, *viz.*, that these causes often occur alone or in combination in persons who never show any symptoms of nightmare, and that the sufferer from the malady may be scrupulously careful to avoid these causes and yet not succeed in obtaining relief.

Recognising the insufficiency of these physical theories, the writer proceeds to attack the question from a different standpoint, expressing the opinion that an attack of nightmare is always an expression of intense mental conflict centring about some form of intense "repressed" sexual desire. He bases his opinion firstly on the intimate relation of nightmare to the ordinary *angst neurosis*, which Freud has shown to be based on a similar ætiology and also on the psychology of dreams in general, which the same writer has demonstrated represent symbolically the fulfilment of some desire which has been repressed and ungratified in the waking state. The literature of the subject reveals the erotic significance of the various images contained in the nightmare. This psychological view gives to the various exciting peripheral stimuli as well as the supine position to which most writers have attached such significance, a secondary rôle as merely provoking certain emotions which are already developed; the predisposition is the all-important essential in the production of the attack. The frequency with which other manifestations of the *angst neurosis* occurs in those subject to nightmare tends to accentuate the importance of sexual conflict and repression in its ætiology.

H. DEVINE.

## 2. Clinical Neurology and Psychiatry.

*A Reaction in the Blood of the Insane [Una reazione nel sangue di malati di mente]. (Riv. Sper. di Fren., vol. xxxv, Fasc. 2, 3, 4.) Bonfiglio, F.*

In May, 1909, Much and Holzmann published a paper in which they alleged that the blood-serum of patients suffering from maniacal-depressive insanity (Kraepelin), dementia præcox (Kraepelin), or epilepsy

with circular mental manifestations, and of individuals in whom the maniacal-depressive psychosis figured only in the family history, had the property of preventing the hæmolysis which cobra-venom by itself is capable of producing in the human subject. As they failed to find this property in the blood of any other individuals, healthy or diseased, mentally or physically, they regarded it as *specific* for the above-mentioned groups of mental affections. Since then many observers have investigated the matter, and their findings are reviewed by Bonfiglio in the present communication. The great mass of evidence proves clearly that the reaction is not at all specific for the affections named. All observers have found the reaction present in some cases and absent in others. The exact proportion of positive and negative findings varies considerably according to the different observers. Again, the reaction has been obtained in a varying proportion in other mental affections, nervous diseases, bodily diseases, and even in the healthy. The writer also discusses the various hypotheses advanced by the different observers to explain the nature of the cobra-venom reaction. The hæmolytic properties of cobra-venom are only exhibited in the presence of an activating substance in the serum which experiments indicate to be, in the majority of cases, lecithin. An inhibiting body is also found in human serum, and this would appear to be cholesterin. The result of the Much-Holzmann reaction would thus depend on the relative quantity of the activating and inhibiting substances present in the various sera. Such is the doctrine supported by the majority of the writers on the subject, followers, apparently, of the Ehrlich school. It has met with strong opposition, however, on the part of a few, especially Bang and Zalozecki. Bang found that solutions of salts, bases, and acids (amongst the last, carbonic acid) introduced into the system exercised an inhibiting action on the hæmolysis, and that carbonic and other acids had even the power of driving off the cobra-venom which the corpuscles had absorbed whilst in ice, and preventing hæmolysis. This finding has given rise to the suggestion that the issue of the Much-Holzmann reaction may depend upon the quantity of carbonic acid present in the various sera, and that a positive result (no hæmolysis) would depend on transitory alterations in the material interchange, and particularly a modified intensity of the processes of oxidation. Zalozecki, on the other hand, attributes greater importance to the presence of lactic acid as an inhibitant of the hæmolytic process deducting this from the fact that he got a positive Much-Holzmann reaction after two hours of strenuous exercise in individuals in whom the reaction was negative prior to the experiment.

J. H. MACDONALD.

*The Complement-Deviation Reaction of Bordet-Gengou [La déviation du complément de Bordet-Gengou]. (Journ. de Med. de Bord., Jan. 17th, 1909.) Vérgier, H.*

These reactions are taking an important place among the laboratory methods having practical clinical applications. To understand them, we must in the first place be familiar with certain elementary notions regarding the general laws of immunity. The writer refers especially

to Metchnikoff's work on "Immunity," and to recent papers on the subject in the *Annales de l'Institut Pasteur* and the *Comptes Rendus de la Société de Biologie*.

(1) If we introduce into a living animal organism anatomical elements derived from an animal of another species, or if we introduce micro-organisms, peculiar changes ensue in the blood-serum of the animal under experiment, which vary according to the nature of the foreign elements introduced. For example, if fresh rabbit serum be introduced into the blood of an ox it has no destructive action on the red blood-corpuscles; but if the rabbit has been previously treated by repeated injections of red blood-corpuscles of the ox, and the blood-serum of the rabbit be then introduced into the blood of the latter animal, the serum is found to have acquired hæmolytic properties, that is to say, it dissolves the hæmoglobin from the corpuscles, so that the blood becomes "laky."

(2) In the accepted scientific terminology, the substance first injected into the rabbit, red blood-corpuscles of the ox, is said to be an *antigen*; the hæmolytic powers acquired by the blood-serum of the rabbit thus treated are regarded as being due to a substance formed in the blood of the rabbit in the presence of the antigen, a substance known as an *antibody*, whose production is the specific reaction due to the presence of this particular antigen.

(3) (a) But the rabbit serum, prepared as described, and containing an antibody, loses its hæmolytic property after heating to 56° C. for half an hour. (b) But if to the serum thus heated, and which has in consequence lost its hæmolytic property, some fresh (untreated) rabbit serum be added (after it has been cooled down), the previously heated serum recovers its hæmolytic property.

From these facts we draw the following conclusions:

Hæmolysis depends upon the co-operation of two distinct substances: one of these, which is to be found only in the serum of prepared animals, and which is *thermostabile* (not affected by heating to 56° C.), and constitutes the specific antibody in relation to the antigen employed, is termed the *sensibilisatrice* (Bordet) or the *amboceptor* (Erhlich); the other, which is a normal constituent of untreated animals, which is destroyed by heating to 56° C., and is not specific in relation to the antigen that has been employed, is termed the *alexin* (Buchner) or the *complement* (Bordet).

In fact, it is necessary to suppose that the prepared rabbit serum no longer contains the complement after it has been heated to 56° C., but that after it has been heated it still contains the antibody; whereas the untreated rabbit serum, which (since it has no hæmolytic property) certainly does not contain the antibody, nevertheless contains the complement. The mixture of the fresh serum (which has not been heated, and is derived from an untreated rabbit), with the serum which has been heated after being derived from the prepared rabbit, reconstitutes the mixture of antibody plus complement which is necessary for the production of hæmolysis.

(4) Neither of the two substances above mentioned can act on the antigen unless the other is also present. But the antibody is specific in relation to the antigen, whilst the complement is indifferent in rela-

tion to the antigen. In a mixture containing the complement and an antibody, the introduction of the antigen corresponding to the antibody under consideration will determine the fixation of that antibody on the complement, which it will, as it were, neutralise.

Similarly, in a mixture containing the complement and the antigen, the introduction of the specific antibody (specific to that antigen) will determine the neutralisation of the complement.

(5) If, now, we suppose an antigen and its antibody to be introduced into fresh rabbit serum containing complement, all this complement will be fixed and neutralised, provided, of course, that the antigen and the antibody are introduced in sufficient quantities. If, then, into this serum, we introduce another quantity of antigen and its antibody, these latter substances will remain without action upon one another, owing to the absence of the complement, which will have been *deviated* towards the antigen and antibody first introduced (Bordet and Gengou).

(6) Let us now suppose that in infective disorders the micro-organism is an antigen, and that the tissue-fluids contain an antibody specific in relation to this micro-organism, and let us take the case of syphilis, to which disease Wassermann has made the first application of this method: the antigen will be provided by an extract of the liver of a new-born syphilitic infant; the antibody will be contained in the blood-serum or in the cerebro-spinal fluid of a syphilitic patient, which has been heated to  $56^{\circ}$  C., in order to destroy the complement, which is one of its normal constituents; finally, the complement will be furnished by the serum of a rabbit which has been treated with red blood-corpuscles of an ox. In these conditions, the three necessary substances being all present, the complement will be deviated towards the antibody and will be neutralised by it. If, now, we add to the mixture red blood-corpuscles of an ox, these, notwithstanding the presence of their specific antibody (since the rabbit has been *prepared*), will not undergo hæmolysis, since the mixture contains no free complement. But if the serum under examination is derived from a patient not suffering from syphilis, and, therefore, contains no syphilitic antibody, its addition to the serum of the prepared rabbit, to which has been added the preparation containing the syphilitic antigen, will not induce the fixation of the complement; on the contrary, the complement will remain free, and when we add the red blood-corpuscles of the ox hæmolysis will take place.

In practice, then, Wassermann's method consists in the examination of the serum or cerebro-spinal fluid of the patient under observation, the examination being made by the aid of rabbit serum treated with red blood-corpuscles of the ox and syphilitic antigen, prepared as already described. In a recent communication to the Académie de Médecine (December 8th, 1908), Marmorek suggests the application of the same method to the serum of tuberculous patients. But he reverses the terms: he looks for the antigen in the serum of the tuberculous patient, the antibody being provided in his anti-tuberculous serum. The principle is exactly the same.

In this summary no technical details have been given. The writer's sole object has been to enunciate the principles involved, especially in



view of the fact that the apparent complication of the method has proved alarming to some who might otherwise have wished to make use of it.

M. EDEN PAUL.

*Systematised Insanity based on Insane Deductions or Paranoia Simplex* (*Psychose Systématisée à base d'Interprétations Délirantes ou Paranoia Simple*). (Bull. de la Soc. de Méd. Ment. de Belg., Aug.-Oct., 1909.) Deroubaix, A.

Dr. Deroubaix gives a general account of the ancient and modern literature of the subject, in which he emphasises the fact that opinions differ very widely regarding the exact nature of paranoia. He defines it as a constitutional and functional mental disease, engrafted upon a basis of mental degeneracy, characterised by delusions of a fixed and systematised type arising from illogical reasoning and judgment. The disease terminates in a state of dementia, more or less marked, but always less pronounced than that which terminates the other insanities. The author admits, however, the possibility of recovery. Hallucinations are for the most part absent. The different types of the disease, persecuted, hallucinatory, etc., do not lead to anything definite, and the differences are more or less artificial. The cause must be looked for more as the outcome of neurotic heredity than as a toxic disturbance; the educated are more liable to the disease than the illiterate. The lethargic and dull are immune, but the reverse holds good in the case of highly strung and precocious. Absence of sensory troubles is characteristic of the disease. The diagnosis can be made early and is based upon the absence of hallucinations, "previous attacks or sensory disturbances," the long history and the type of individual. Several cases are given in considerable detail, which demonstrate the writer's purpose. The paper is interesting, but left one not quite convinced regarding the possibility of a differential diagnosis in the various types of paranoia. The treatment of these cases at once opens out the question of danger to individuals or communities, and the writer pleads for a kinder treatment of these people when they have offended the laws of their country. Asylums, not gaols, should be their dwelling-place.

COLIN McDOWALL.

*Litigious or Wrangling Insanity or Paranoia Querulans of the Germans* [*La Folie Processive ou Querulante (Querulanten Wahnsinn) ou Paranoia Querulans des Allemands*]. (Bull. de la Soc. de Méd. Ment. de Belg., Feb., 1910.) Maere.

This is the querulent paranoia of the Germans. The differences between the varieties known as cavilling, wrangling, litigious, and claimant paranoiacs are trifling. The litigious are those with a tendency to constant procedure, spending the main part of their existence in the precincts of law courts.

The arguing or wrangling patients are more often bent upon incessant recrimination. Lastly, the claimants proper crave the depossession of those they believe frustrate their claims and use all means to regain possession.

They are all obsessed by the one passionate and prevailing idea.

In the beginning, the insanity is allied with a wild apprehension of unforeseen injustice, which is presently transformed into a firm belief that the patient has been deprived of all his rights, and which results in a hyperæsthesia of his *amour propre* or the hypertrophy of his ego. The alteration in the psychical personality leads the patient into absurdly extravagant actions, since he is already intolerant, impatient, choleric and more difficult and vain in the family circle than with strangers.

All the patients write, often in an alert but unduly authoritative style. They abuse and slander in papers and pamphlets, muddling their sentences and quotations, underlining words and emphasising in large letters.

The circle of their imaginary enemies enlarges so long as their grievances fail to obtain satisfaction, all questions or counsel being received with suspicion. For themselves they only demand their rights and of others simply their duty. They use any and every stratagem to reach their ends.

In spite of their apparent logic and conservation of memory, they miss the clairvoyance of the critical spirit.

Their obsession to seek justice leads them to believe everything is contrary to right. They are credulous beyond belief and become the prey of their querulance.

Improvement for a while is the rule, but relapse is certain to follow.

It is recognised that all these patients are most dangerous and often go to the worst excesses. They are persecutors from the beginning. At liberty they are scandal-mongers; in an asylum they criticise everyone, condemning authorities and discussing their wrongs with other inmates—instigating all kinds of difficulties. The disease terminates irregularly, sometimes by accident, cerebral hæmorrhage, or softening, sometimes abruptly, but in this case it is not by cessation of the mania but by a rather forced resignation. This is only an apparent recovery.

That dementia does appear towards the end of the disease is undoubted.

COLIN McDOWALL.

*A Case of Interpretational Insanity* [*Un cas de délire d'interprétation*]. (*Rev. de Psych.*, April, 1909.) *Serieux, P.*

*The Interpretational Insanity of Serieux and Capgras* [*Le délire d'interprétations de Serieux and Capgras*]. (*Ibid.*, July, 1909.) *Mignard, M.*

*The Mild Form of Interpretational Insanity* [*La forme atténuée du délire d'interprétation*]. (*Ibid.*, August, 1909.) *Halberstadt.*

Since the differentiation of the *délire d'interprétation* from the group of the *paranoïas* some years ago by Serieux and Capgras, much has been written on the subject, and the appearance of their work on *Les Folies Raisonantes*, which bids fair to become a classic, has further stimulated interest in this important clinical entity.

In the April number of the *Revue de Psychiatrie* for 1909, Serieux describes a perfect example of this disorder with that accuracy of observation and charm of presentment which give such life to his work. This case exhibited all the classical signs of the disease—that is to say, the persecutory ideas were based entirely on false interpretations of

actual facts, the interpretations were multiple and organised, hallucinations absent, mental activity and clearness unimpaired, and the incurable disorder progressed steadily without any terminal dementia.

Mignard's paper in the July number of the same review is a critical digest of the section on interpretational insanity in Serieux and Capgras's recent book. He is quite in accord with these authors in looking on it as a clearly defined variety of paranoia, and points out that at the base of the trouble lies an exaggerated self-esteem, betraying that lack of the critical faculty which is so often the cause of error and even insanity. The patient gives a personal meaning to everything, hypotheses are formed, a system is built up, and finally the key to the whole trouble is found in some dominant idea. While the disorder usually occurs in the mentally degenerate, it is not incompatible with a high degree of intelligence or even with genius, as in the case of Rousseau, who was an excellent example of this mental trouble. Remissions, exacerbations, and even hallucinatory paroxysms may occur in the course of the disorder, but the insanity progresses steadily and incurably.

Dr. Halberstadt's paper in the August number of the same journal describes an attenuated form of interpretational insanity, and a case is quoted at length. In this type the delusions are of limited extent and closely surround some central idea, generally of persecution. They do not evolve progressively, as in the classic form, and may even be forgotten by the patient. (This is probably only the process of eclipse to which Dr. Legrain has drawn attention in a recent monograph.) This form occurs most frequently in women of mental development below the average, and the author gives his reasons, not quite convincing to us, for considering that it is a distinct variety of this important disorder.

W. STARKEY.

*Onomatomania in an Old Man æt. 74* [*Onomatomanie chez un vieillard de 74 ans*]. (*Bull. Soc. Clin. Méd. Ment.*, Dec., 1909.) *Juquelier et Dalmás*.

This old man was brought to the asylum after attempting suicide by drowning. There was little mental reduction, the only sign of senility being a slight tremor, which had interfered with his work as a porcelain-painter. Father died æt. 84, demented. Mother asthmatic; two brothers, alcoholics, died of tubercle. The patient has always been of an emotional and suspicious nature, and has had slight attacks of persecutory mania; occasionally also he has experienced mild obsessions, such as having to count certain objects, alter their positions, etc.\* A year ago he quarrelled with a fellow-workman, and this so preyed on his mind that he retired from business. Almost immediately afterwards his present form of obsession began. Thinking of his old workmates one day, he found that he had forgotten the name of one of them. He tried to recall the name but without success; he experienced acute distress, felt a sense of oppression, his heart seemed to be in a vice, his face was bathed in sweat, his hands cold, he wept and paced his room in a state of extreme anguish. From this time onwards his life has been made miserable by this incessant search for names. He fears to go out lest someone pass him in the street whose name he should know, but fail to remember. He avoids reading the papers, lest some word

or picture should start a new search for names. He spends his days in writing down words as an aid to his memory, or in reading pages of the dictionary in the attempt to find some name or other. His sleep is interfered with by his obsessions, which continue even at night. He quite recognises the absurdity of his search for words; they are of no use to him, and are often of the most bizarre nature. When the missing word is found his relief is only temporary, as a fresh search starts almost at once. There has been no improvement in his condition since admission to the asylum, and the general opinion as to prognosis is unfavourable. In some cases the distress associated with the obsession lessens in time, and some recoveries are recorded.

W. STARKEY.

*Two Cases of Squamous Epithelioma in General Paralytics* [*Deux cas d'épithéliomas pavimenteux chez des paralytiques généraux*]. (Bull. Soc. Clin. Méd. Ment., Feb., 1910.) Vigouroux, M. A.

Dr. Vigouroux reports two cases of epithelioma occurring in general paralytics, æt. 41 and 35 respectively. In the former, the glans penis was the site of the cancer, which developed a month before death; in the latter the lower lip was affected, and the epithelioma existed some months prior to the onset of the mental trouble. The association of epithelioma with general paralysis is extremely rare, possibly due in part to the fact that general paralysis usually ends fatally before the age of incidence of cancer. It is also interesting in view of the fact that some writers (notably Fournier) regard these epitheliomata as of parasymphilitic origin.

W. STARKEY.

*A Clinical and Anatomical Examination of the Nervous System in Thrombosis of the Abdominal Aorta in Man* [*Indagine anatomo-clinica sul sistema nervoso, nell'uomo colpito da trombosi dell'aorta addominale*]. (Ann. del Manicomio, 1909.) Rebizzi, R.

The author gives a detailed and precise account of the symptomatology of a case of thrombosis of the aorta leading to complete obliteration of the vessel below the origin of the renal arteries. The initiation was sudden and characterised by complete paralysis of the lower limbs, accompanied by irregular and extensive areas of cyanosis, in which gangrenous changes rapidly supervened. The patient died twelve days after the first symptoms appeared, and was the subject of a full pathological examination. Particular interest was attached to the histological changes in the spinal cord—mainly chromatolysis in its various degrees—and the discussion of their relation to the peripheral lesion. From the facts of his own case, and the published accounts of some thirty others, the author shows that there is no evidence to support the notion that the peripheral condition depends upon lesion of the spinal column. The paralysis and gangrene of the lower limbs are due entirely to their condition of absolute anæmia resulting from the closing of the aorta. The lesions in the spinal cord are, in the main, secondary to the necrosis of the nerves in the lower limbs. Changes of a primary nature, when they occur, are less intense, and confined to that region of the cord directly dependent for its blood supply on the abdominal aorta.

J. H. MACDONALD.



*The Albuminous Reaction of the Sputa in the Diagnosis of Pulmonary Tuberculosis in Psychiatric Practice* [*L'Albumino-reaction des crachats dans le diagnostic de la tuberculose pulmonaire en psychiatrie*]. (*Prog. Méd.*, April 9th, 1910.) Cornu, Ed.

The detection of albumen in the sputum is said to rank as a valuable aid to the diagnosis of pulmonary tuberculosis, especially as it is easy of application, and gives, according to the researches of Roger and Levy-Valensi, followed by those of Oddo and Gachet and then the present writer, valuable and reliable results. Roger obtained a positive reaction in 200 cases of tuberculosis and Oddo in twenty-nine, in six of which the bacteriological examination had been negative. These authors state that albumen is always present in tubercular sputa, and only cases of bronchitis associated with albuminuria or cardiac conditions give the same reaction. The elimination of such cases is easy, and the absence of albumen would lead to the rejection of a diagnosis of tuberculosis. The procedure is as follows: Dilute the sputum with about 50 per cent. of water; add a few drops of acetic acid to coagulate mucine; shake briskly in a test-tube (with the aid of broken glass if sputum is very thick); filter; test filtrate for albumen by the usual methods, preferably by heat. Roger at first employed a concentrated solution of ferrocyanide of potassium, but now prefers boiling. Cornu adds to the filtrate one tenth of its volume of a saturated solution of sea-salt or of sulphate of soda in order to render coagulation more evident, then boils the upper layer. Sputum containing blood must be rejected. Cornu obtained a positive reaction in twenty-four cases. Twenty were manifestly tubercular, the bacillus being present. Three were suspected to be tubercular on general grounds—loss of weight, anorexia, poor health—but the clinical examination had not permitted a definite diagnosis. A positive reaction was obtained on four different occasions in another patient who had given no clinical evidence of a tubercular infection. He had suffered from several attacks of bronchitis, regarded as simple, and some attacks of acute articular rheumatism, and presented a slight systolic murmur at the apex. At the time of examination of sputum he was complaining of rheumatic pain in his knee. The question then arose as to whether the albuminous sputum was dependent on the cardiac condition or related to a tubercular arthritis.

J. H. MACDONALD.

*What is Meant at the Present Day by the Term "Arterio-Sclerotic Psychoses?"* [*Was kann man heute unter Arteriosklerotischen Psychosen verstehen?*]. (*Psych.-Neur. Wochenschr.*, No. 52, 1909-10.) Olah, Gustav v.

In order to reach a distinct understanding as to the meaning of this term, which is now so widely used or misused, Dr. v. Olah points out that there is no such thing as arterio-sclerotic psychosis in the sense of a disease having a clinical individuality and specific anatomical findings. He describes a progressive form of dementia, typical in its course, specific, virulent, and fatal, *in connection with which* arterio-sclerotic changes in the vessels of the brain are found.

The first symptoms are partly of psychogenic and partly of physical character. The patient complains that an arm or foot is "as if

paralysed." Sometimes there is a disturbance or hesitation of speech, especially after indulgence in alcohol, or when the patient is fatigued; he is not quite sure of the form and meaning of words, and inverts syllables here and there. As the disease progresses there is complete disorientation, the patient easily misses his footing, and sits clumsily on the edge of his chair, etc. Sometimes he passes years of comparative comfort between the stages of the disease—as if the brain had found a way to accommodate itself to altered circumstances—then there are fresh symptoms. The faculties of perception, power of attention, and reproduction are in turn or at the same time affected. The patient, who is conscious of the loss of his faculties, dies after intercurrent illness.

The chief points to be noted in this article are :

(1) Arterio-sclerosis in the fine arteries of the brain is not to be inferred from the affection being found in other parts of the body.

(2) In the same way sclerosis of the cerebral arteries does not always accompany the symptoms above described—as, indeed, common pre-senile arterio-sclerotic change does not seem to dispose to the specific affection referred to.

(3) There is a nosological involution psychosis which has not yet been given a distinct position, and which is found with a greater or smaller degree of sclerosis of the smaller arteries of the brain. This form has a clinical individuality, but is not the result of arterio-sclerotic change.

(4) The name arterio-sclerotic psychosis is not well chosen for this form: Firstly, because the mental symptoms seldom accompany arterio-sclerosis in the usual sense; further, because the same anatomical changes are also found with other psychoses; and lastly, because to give an anatomical title to the non-anatomical symptoms of a disease is out of place and absurd.

HAMILTON C. MARR.

*On Myxœdematous Change in the Skin accompanying Manic-Depressive Insanity* [Ueber myxodematose Hautveränderungen als Parallelvorgang bei manisch depressiver Psychose]. (*Neur. Cbl.*, No. 4.) Tomaschny.

The author observed in a patient suffering from manic-depressive insanity a cushion-like swelling of the lower part of the face, especially of the lips, also great increase of bulk about the shoulders and hips. The thyroid glands were palpable. Thyroid tabloids, which were administered for a short time, had a detrimental rather than a beneficial effect. The myxœdema disappeared with the abatement of the manic-depressive excitement.

HAMILTON C. MARR.

### 3. Treatment of Insanity.

*The Value in Private and Institutional Practice of a Regimen containing a Minimal Quantity of Salt, in Association with the Administration of Bromides* [Die Bedeutung der salzlosen Brombehandlung für Anstalt und Praxis]. (*Psychiat.-Neur. Wochensch.*, Dec. 11th, 1909.) Dorner, J.

After a considerable discussion and extensive trials, says the writer, it

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has gradually come to be admitted that in nervous diseases, and above all in epilepsy, the use of bromides in conjunction with a diet containing a minimal quantity of salt gives more favourable results—in epilepsy both as regards the individual paroxysms and as regards the general condition—than other modes of treatment. His own experiments lasted for four years; sixty-four patients were subjected to the treatment, and of these all but one were confirmed epileptics. The duration of the individual “cure” varied from six weeks to one year; in most cases it lasted from three to six months. In most of the patients the epileptic seizures occurred at brief intervals; most of them exhibited the enfeebled mentality characteristic of such patients; all but one had previously taken bromides for several years.

Pure milk diet was not tried, on account of its well-known disadvantages—great dislike to it on the part of many patients, gastric disturbances, etc. For children the diet was chiefly oatmeal, rice, eggs, and milk; for adults, ordinary mixed diet, sometimes with, sometimes without meat, but in all cases without artificial admixture of salt. Whatever bread given was also made without salt. The nutrient value of the diet was from 3,000 to 3,600 calories. The influence of meat was unmistakable; when the diet contained no meat the action of the bromide was far more powerful. Only in one case was there any difficulty in getting the patient to accept the restricted diet, but it must be remembered that many of the patients were weak-minded. The diet was made more agreeable with fruit and various vegetables.

The doses of bromide given varied according to the needs of the particular case, just as is done when an ordinary diet is given; but in the case of salt-free diet smaller doses suffice. The quantity given ranged as a rule from ten to sixty grains daily. In about half of the cases the number of attacks gradually diminished for about three weeks, and then for a time no paroxysms occurred; in 40 *per cent.* more a marked diminution in the number of seizures was noticeable—*e.g.*, from twenty per month to two or three. In three cases only out of the sixty-four was there no improvement at all as regards the paroxysms. In 65 *per cent.* of the cases there was a notable gain in weight—six to ten pounds; and in many the gain in weight lasted for many months after the “cure” was over. In a good many of the cases there was a very striking improvement in the mental state.

But the good effects of the method are not enduring. The writer did not observe a single case of permanent cessation of the epileptic seizures. In two of the cases which had before survived periods of the status epilepticus, this state reappeared soon after the (enforced) return to a salt-containing diet, in both cases with fatal issue. In four cases of the series there was notable loss of weight and marked anæmia in consequence of the change of diet. Two of these were advanced in years, and one of them died of heart failure. Ten of the sixty-four patients displayed great increase in mental irritability with paroxysms of violence—not controlled by an increased dosage with bromide. In seven of the patients the “cure” was discontinued on this account.

Moreover, the advantages and disadvantages of the method were so variously distributed, that only fourteen of the entire number of

patients—21·8 *per cent.*—were simultaneously benefited in all three respects, *viz.*, diminution in number of paroxysms, gain in body-weight, and improvement in mental condition.

Since in institutional practice, with the patients under constant observation, the risks and disadvantages of the method are considerable, it is obviously unsuited for the treatment of hospital out-patients. The return to a normal diet must be made very gradually and carefully.

The writer suggests that the salt-free diet should be continued after the first month only in those who have during that time gained weight and improved in other respects. Those whom the "cure" does not suit will thus be eliminated; those whom it does suit undoubtedly gain long-enduring benefit.

M. EDEN PAUL.

*Treatment of Epilepsy with Bromoglidine* [*Die Behandlung der Epilepsie mit Bromoglidine*]. (*Psychiat. Neur. Wochensch.*, Nov. 20th, 1909.)  
Kurt, Halbey.

Bromoglidine and iodoglidine are compounds of bromine and iodine with vegetable albumen, which have recently been recommended to replace the metallic salts of these substances for internal administration. Having tried the first-named drug on ten epileptics for a period of five weeks, Kurt summarises as follows the results obtained:

Bromoglidine is not inferior to the metallic bromides in its power to control epileptic paroxysms.

The absorption of bromoglidine being more rapid than that of the metallic bromides, the physiological effect of the drug is more rapidly obtained; if it is administered in the usual way during the day-time, the fits are controlled during the waking hours, and postponed to the night; this is advantageous, especially in the case of patients who have to work in the day-time.

Symptoms of bromism do not appear even when very large doses of bromoglidine are administered (this is in agreement with what has been noted by other observers).

In many long-standing cases of epilepsy with considerable mental enfeeblement, great irritability and inclination to violent outbreaks is noticed—apparently due to the bromides, in great part at any rate, since these symptoms largely disappear when the drug is discontinued, and recur when its administration is resumed. But a similar increase in irritability and in tendency to violent outbreaks was not observed when bromoglidine was administered in place of the metallic bromides.

M. EDEN PAUL.

*Hypnotism.* (*Bristol Med.-Chir. Journ.*, March, 1910.) Costobadie,  
H. P.

The value of hypnotism in the study and treatment of disease, the author says, depends on the fact that it increases suggestibility. So greatly is suggestibility increased by hypnotism that it is only necessary to tell a patient, in a deep hypnotic sleep, that he has just received an electric shock for his muscles to tighten, and his face to twitch in a way which shows without doubt that he believes he feels it, and, moreover, he will tell you that he does. Every sick person, the author



believes, is subjected, knowingly or unknowingly by his doctor, to treatment by suggestion. The limits of hypnotism as an adjunct to therapeutics largely depend, he says, upon an individual operator and a particular patient. In his experience, he has found it particularly useful in functional diseases—tics, tremors, and nervous spasms and cramps, some neuralgic pains and headaches, hysterical paralysis, convulsions and aphonia, many phobias, and so on, while sleeplessness and sleep-walking can be cured by its use.

He has also been successful in nocturnal enuresis, chronic constipation, dyspeptic discomfort, and the vomiting of pregnancy, but he failed to control the pains in a case of labour.

He was able to benefit a case of melancholia for a few months, but in a case of epilepsy it had no good results.

He refers to the case of a dentist cured by Sir Francis Cruise of a coarse tremor of the hand and arm which came on whenever he took up an instrument to operate, and which at last made his work impossible. A patient of his own, a miner, became obsessed by a fear of returning to his work after an injury to his hand, received eleven weeks previously. He was twice hypnotised and the suggestion made that he should return to his work on a certain day. He did so, and has remained at work ever since. In alcoholism and the drug habit, the myalgia of tonsillitis and the restlessness and headache of influenza, as well as in slight operations to abolish pain, the author has proved the value of hypnotism.

Of the complications following hypnosis, headache seems to be the most common, coming on after the first sitting, but he has never known it to persist after he has re-hypnotised the patient and made suitable suggestions. He believes the popular idea as to how hypnotism may be used for criminal purposes to be exaggerated and distorted.

In conclusion, he refers to post-hypnotic suggestion and subconscious memory, and instances the case of a patient who saw and described minutely the picture of a large room which he had not seen for five years, and could not remember ever to have seen before until he was re-hypnotised, when he described when and where he had seen it. He could give no reason at all when awakened why he should have recalled this picture, but when again under the influence of hypnotism explained that it was recalled to his memory by some little glass knobs on the chandeliers in a church which he had visited earlier in the day.

The subconscious memory may be an important factor in disease, the author thinks, for by its repeated stimulus acting, for example, on imagination, it may be the obscure origin of some of those still more obscure conditions which occur in so many functional and mental diseases, if not the cause of some of those diseases themselves.

A. W. WILCOX.

*A Criticism of Freud's Psycho-analytic Method* [*Die Psychoanalytische Methode Freud*]. (Zt. f. die gesamte Neurol. u. Psychiat., Bd. i, Heft 1, 1910.) Isserlin, Max.

This new journal is a successor to the *Zentralblatt für Nervenheilkunde und Psychiatrie*, founded by Dr. Kurella in 1890, and is edited by Prof. Alzheimer and Dr. Lewandowsky.

The first number opens well with several lengthy and valuable papers, as by Alzheimer on diagnostic difficulties in psychiatry, by Hasche-Klunder on the transformation of obsessions into insane delusions, and an elaborate attempt by Weiler to give greater precision to the measurement of the knee-jerk. Especially interesting, perhaps, is this very able and seaching criticism of Freud's methods.

The discussion of Freud's views is not, Isserlin begins by stating, a mere fashion; it really concerns one of the weightiest problems which psycho-pathology has to-day to solve. The cardinal principles of our science are at stake, and the establishment of Freud's doctrines would mean an entire change in our conceptions. For ten years Freud's books found few readers; since 1905 they have become better known, and attracted many followers, while the experiments and observations on his lines at the Zürich Klinik, have especially aroused general attention. Isserlin carefully traces the growth of Freud's views and the considerable changes they have undergone.

Freud's psychology is specially marked by its peculiar conception of the unconscious; it is for him something incapable of consciousness, something that has been repressed, and it is of sexual character as to its content. The conscious is, for Freud, only a small and fragmentary part of psychic life, unintelligible and absurd until interpreted by what is going on in the unconscious sphere. When so interpreted its absurdities disappear, and life becomes rational. Neuroses, dreams, and delusions are masks that cover its real aims. They are, indeed, more than that. Neurosis, dream, insanity, are aids in the conflict of life, and so become intelligible. They are essential links in a chain which reaches through the entire psychic life. They are thus allied to philosophy and religion, and the psycho-analytic method leads to a comprehensive vision of the entire human soul and its final aims.

We cannot fail to admire this conception, Isserlin proceeds, and we might be content with that admiration if Freud had not applied his conception to definite empirical problems. Then we have to challenge his proofs. Proof is needed both as regards his facts and his method. The main alleged facts are the infantile sexual constitution and the mechanism of symptoms through suppression, conversion, and symbolisation. The method is the process by which this mechanism is uncovered and interpreted; it chiefly consists in encouraging free, uncompelled associations. The patient takes the leading part and says whatever comes into his head, however absurd; the physician is passive and supplies no clues, but he notes everything, and detects those significant points at which the patient experiences repulsion in expressing what comes into his head. That there are therapeutic advantages in this method Isserlin does not deny, but they are easily explained, and he points out that while the method has undergone radical changes in Freud's hands the same beneficial effects are still claimed, though if, as Freud now holds, psycho-neurotic conditions are constitutional, organically and chemically based, it is difficult to see how psychic methods can influence them. Isserlin argues, however, that Freud's method is not capable of proving that suppression, in the sense and to the extent claimed, actually takes place, and that there is no way of proving its validity. Even if suppression occurs it has not been established by Freud that his analytic

method necessarily leads to the suppressed material. There is no proof. The connection between the symptoms and the suppressed causal facts is pure hypothesis. The psycho-analytic method is not justified and its claims are untenable. Jung's assertion that by Freud's method it is possible to reconstruct the whole psychic complex out of every psychic particle is a dismal error.

Isserlin admits that Freud has, in the conception of "suppression," struck on a great problem, and that in a number of cases, both normal and pathological, it is a fact. The idea of "conversion," to a less extent, has its value, especially in the explanation of hysteria. The doctrine of the significance of sexuality in psycho-neurotic conditions is, however, unproved. Freud's declaration, "With a normal *vita sexualis* neurosis is impossible," should be changed to "In neurosis a normal *vita sexualis* is impossible"; *i.e.*, it is not the *vita sexualis* which is fundamental.

Isserlin believes that Freud's method of investigation and treatment by free association is useful. He recognises a real and positive kernel in Freud's doctrines. But he holds that while we must not grudge our tribute of admiration to Freud and his school for the energy they have displayed and for their self-sacrificing devotion to an unpopular cause, it is premature to discuss Freud's claims to our gratitude so long as his method involves a confusing perversion of scientific maxims.

HAVELOCK ELLIS.

*The Present Position of Psycho-therapeutics [Zum gegenwärtigen Stande der Psychotherapie]. (Münch. med. Woch., Nos. 3 and 4, 1910.) Löwenfeld, L.*

After a long period of neglect, psycho-therapeutic methods have during the past ten years become very prominent. In the present paper Löwenfeld attempts, in his usual judicial and discriminative manner, to estimate their value. He deals both with hypnotism and with the psycho-analytic method. He also touches on Bonnier's method of nasal galvanisation, which he regards as acting by suggestion.

The cause of therapeutical hypnotism Löwenfeld regards as now won, though it still has opponents. No one who has had any serious clinical experience of the method regards it as worthless, so far as he knows, while none of those who regard it as worthless have any real clinical experience in its use. Only a small proportion of German neurologists now reject hypnotism, though a large proportion seldom use it or use it only as a last resort. Many of them consider the method has dangers. In twenty years' experience, however, Löwenfeld has never seen any evil results, psychic or physical. He mentions that hypno-therapeutic methods are zealously cultivated in Russia, both by alienists and neurologists, and are found very successful in combating the alcoholism which abounds in that country.

Löwenfeld is thus entirely favourable to hypno-therapeutics, properly carried out in suitable cases. Towards Freud's psycho-analytic method his attitude is more complex. That method, though it is supported by an increasing band of ardent followers, has not conquered general favour, and is by many severely anathematised. Löwenfeld points out,

however, that not one of those who adopt this latter attitude has ever made any serious attempt to employ the method he condemns, and he reproves those who, with Ziehen, are content to exclaim "Nonsense!" when, since they refuse to attempt proof, they are only entitled to put forward the modest verdict, "unproven." Löwenfeld is unable to accept Freud's theory of the sexual origin of neurasthenia, but after long investigation he substantially agrees with Freud concerning the causation of the neurosis of anxiety, and also obsessional neurosis (which he believes may be successfully treated by Freud's method but not by hypnotism), though not as regards obsession in general. He maintains an attitude of reserve towards Freud's theory of hysteria, believing that many facts cannot be harmonised with it, and he points out that Jung, who is a follower of Freud, considers that there are types of hysteria not covered by the theory. Freud's great service, in Löwenfeld's opinion, lies in his conception of the part played by the unconscious in psychic life and his therapeutic method of removing morbid states by translating them from the unconscious to the conscious. The place assigned by Freud to the sexual element in the causation of morbid conditions is a comparatively unimportant matter.

HAVELOCK ELLIS.

#### 4. Pathology of Insanity.

*The Significance of Plasma-Cells in the Histopathology of Progressive Paralysis* [Über die Bedeutung der Plasmazellen für die Histopathologie der Progressiven Paralyse]. (Zeitschr. f. Psychiat., vol. lxxvi, part 34.) Behr, H.

Since Nissl and Alzheimer have drawn attention to the infiltration of cells into the vessel sheaths, to the regular finding of Marschalko's plasma-cells in the infiltrations, and further, to the appearance of peculiar cells described as rod-like in the cortex of paralytics, the microscopic diagnosis of the disease has advanced greatly in clearness and certainty.

Certainly in the remaining tissue of the cortex both ectodermal and mesodermal "Provenienz" changes have been noticed (especially in advanced cases), and other changes which go to confirm the diagnosis. To these the author adds disturbances of the normal cortex architecture, the displacement of, and subsequent changes in, the ganglion cells, which generally have very distinct growths like fibrous glia, the atrophy of the tangential vessels of the supraradial crust, and lastly, the various changes in the vessels (growth of cells in the vessel walls, building of germs, increase of capillaries).

The pathological changes generally found in the cerebral cortex are in no way typical of paralysis, while we have, after examination for plasma-cells, at least a very characteristic, and, by its easiness, an excellent means of separating paralysis histologically from other mental ailments, even if the finding of the rod-like cells has not helped to confirm our diagnosis.

Vogt holds the plasma-cells to be directly pathognomic for paralysis, and questioned whether they were to be found spread diffusely over the



cortex in other states. Havet and Alzheimer, on the contrary, are of opinion that this condition is to be found in certain cases of idiocy.

In the histo-pathological differentiation of paralysis and syphilitic meningo-encephalitis great difficulties often arise, especially when the syphilitic process does not confine itself to small portions of the meninges, but spreads itself over a larger or smaller portion of the pia and the brain substance thereunder. Here are also to be found infiltrations of cells into the cortical vessels. The infiltrations, as in paralysis, contain, besides lymphocytes, plasma-cells. In lues is noted the dependence of the encephalitic process on the infiltration into the meninges—a dependence which cannot be traced in paralysis, where the regular appearance of a larger or smaller purely pia infiltration and the changes in the cortex are expressions of an inflammatory process, which attacks equally the vessels of the pia and the brain substance. At the same time, there can be no question as to the difficulty of differentiating the two diseases by microscopical findings. There are cases in which paralysis cannot possibly exist, and in which plasma-cells have been found, generally in confined spaces in localised diseases, and mostly in small quantity.

The author gives results of microscopical examination in 115 cases. Thionin was used very successfully for staining. In 59 of the cases paralysis was diagnosed clinically, and was confirmed histopathologically in 55. In each of these 55 cases the plasma-cell infiltration was traced to the sheath of the vessels of the cortex and of the medulla. Sometimes the cells were isolated and scarce, being with difficulty discovered among numerous lymphocytes; at other times they were found in large quantities among lymphocytes, mast cells and other forms of cells, forming the broad cell rings which often surrounded the narrow vessel lumina, and gave to the microscopic picture in many cases a very characteristic appearance. They were generally confined to the larger vessels on the adventitial lymph-sheaths, but, in cases where the inflammatory infiltration reached the media and the intima, they were found in other layers of the vessel wall, and in the lumen. They were also to be traced to the smaller capillaries, and often by their quantity covered the vessel wall. They were sometimes found in the brain substance, at some distance from the vessels; cells thus found were isolated and retrogressively changed. It appears from this, that in relatively rare cases the plasma-cells, which are doubtless of hæmatogenous origin, can over-reach the biological boundary between mesodermal and ectodermal tissue. According to a lately published work by Ranke, in young, and especially in foetal organisms, the tendency is, when there is an infiltrative inflammatory process, to a diffuse spreading of the hæmatogenous elements through the nervous substance. This he confirmed more successfully in a few cases of diffuse, although not purulent, foetal encephalitis, than in cases of lues congenita. At all events, this is not frequently observed in paralysis, and in each case the examination must be most careful, as the delicate capillaries, which are often only recognised by isolated endo-cells, can easily be overlooked.

Vogt's opinion that the plasma-cells are most plentiful in cases where the disease progresses quickly is confirmed, although this was not found in every case.

The plasma-cell infiltrations were spread diffusely over the whole cortex in paralysis, although their quantity differed in the several regions. They were most numerous in the frontal region. Examination of the plasma-cells showed degenerative and other changes. They were also found in the central ganglia, in the cerebellum, and spinal cord. They were richest in the optic thalami.

The conclusions reached by the author are that stress must be laid on all sides on the importance of plasma-cell infiltrations into the vessel sheaths of the brain for the histopathology of progressive paralysis. There is no true paralysis without this, and its absence denotes that paralysis is not present. The diffuse spreading of plasma infiltration is the most characteristic sign of paralysis. At the same time, the finding of isolated plasma-cells can in no way lead to the conclusion that a paralysis was present. The cells are also found, isolated and in circumscribed areas, in other diseases of the nervous system, as phenomena of an inflammatory process, which runs its course subacutely in the vessel walls. The only certain characteristic as yet is the diffuse entry of the plasma-cells into the central nervous system. This, it has long been confirmed, is not found in any other disease, as we have, up to the present time, found a diffuse inflammatory process of the vessel walls only in paralysis.

HAMILTON C. MARR.

*A Contribution to the Study of the Pathological Anatomy of Progressive Paralysis; Visceral Alterations; Some Considerations Regarding Plasma-Cells* [Contributo allo Studio dell'Anatomia Patologica della Paralisi Progressiva; Alterazioni Viscerali; qualche Considerazione sulle Plasmacellule]. (*Riv. di Patol. Nerv. e Ment.*, vol. xv, Fasc. 1.) Catola, G.

Dr. Catola has examined the liver, kidneys, spleen, muscles, peripheral arteries, and in a few cases the optic nerves, in progressive paralysis, and has reached the following conclusions:

(1) In the viscera of general paralytics a series of vascular and perivascular alterations are found, lymphocytic infiltration, and plasma-cells. Alterations are also present in the parenchyma, especially of the nature of a cloudy swelling and degenerations. These changes are comparable in great part to what obtains in the nervous centres. They cannot be considered as lesions essentially specific in regard to progressive paralysis, especially when they are found in the nervous centres, as such changes are found in other dyscrasias and toxic states. Lymphocytosis and the presence of plasma-cells are phenomena giving evidence, more or less, of connective-tissue hyperplasia.

(2) The presence of lymphocytes and plasma-cells, especially in the liver, are characteristic enough of general paralysis when the infiltration of such elements is diffuse and more or less uniform throughout the liver, and more particularly when focal lesions, such as tumours, parasites, abscesses, etc., and other diffuse but recognisable lesions, such as tubercle, syphilis, cirrhosis, etc., are wanting. Normally the liver and kidneys do not contain plasma-cells and lymphocytes; when they are rich in such elements, and more or less recent cirrhosis is not present, the liver and kidneys are probably those of paralytics.

(3) In none of the paralytics examined have the histo-pathological

features described by Klippel under the name of "vaso-paralytic liver" been found. The assemblage of symptoms described as vaso-paralytic are :

(a) A greyish-brown liver due to dilatation and weakness of the left ventricle.

(b) Red atrophy.

(c) Disseminated plaques of red atrophy.

(d) Fatty degeneration.

(e) Diffuse sclerosis of embryonal type without marked contraction.

(4) There is no sensible difference in the viscera of paralytics dying while in a good state of general nutrition, and those dying of cachexia with more or less extensive bedsores. Meta-syphilitic intoxication, or whatever state constitutes the fundamental causation of general paralysis, appears to be sufficient to produce the alterations described.

(5) The plasma-cells are produced from the fixed cells of the connective tissue. Plasma-cells as described by Unna and Marschalko are of hæmatogenous origin, and may be classed with other elements separated by many morphological characters. The plasma-cells of Hodara are pseudo-plasma-cells, being probably mononuclear leucocytes greatly modified in their staining reactions.

HAMILTON C. MARR.

*Plasma-Cells and the Reactive Phenomena in Cerebral Cysticercus* [Sulle Plasmacellule e sui Fenomeni Reattivi nella Cisticercosi Cerebrale]. (Riv. di Patol. Nerv. e Ment., vol. xiv, fasc. viii.) Papadia, G.

As a result of a parasite in the brain a stimulus resembling a toxic influence is produced. The complexity of the reactive phenomena is clearly differentiated from the structure of the normal histological elements, and has specific characters. There is an accumulation of leucocytes with polymorphic nuclei, and a large number of giant cells in immediate contact with the parasitic membrane. The connective tissue is markedly increased, and forms the two internal strata of the adventitial cyst. In the external stratum, plasma-cells, eosinophile leucocytes, and lymphocytes exist as perfectly distinct elements. Transitional forms of cells are noted between plasma-cells and the special elements of the connective tissue. These have a basophilic reaction. The conclusions the author reaches are that the plasma-cell is not of hæmatogenous origin, and the evidence is wholly favourable to an origin from connective tissue.

HAMILTON C. MARR.

## 5. Sociology.

*The Control of the Insane with Criminal Tendencies* [Die Unterbringung der Geisteskranken mit verbrecherischen Neigungen]. (Psych.-Neur. Wochenschr., April 9th and 16th, 1910.) Nitsche, P.

In this paper, read before the Dresden Forensisch-Psychiatrische Vereinigung last March, the author discusses the rather hackneyed question of the method of dealing with dangerously criminal lunatics. The arguments on the matter are too familiar to need re-statement, but some points brought out by the author may be of interest as showing

the trend of ideas on the question in Germany. He deals in some detail with the system of lunatic wings attached to prisons, a system which exists in Prussia, Wurtemberg, Saxony, and Baden. This system he approves of so long as the special wings are used only for the temporary detention of offenders who have shown signs of insanity while undergoing the ordinary penal discipline. It appears, however, that a wider extension has been given to this method at Waldheim, where the lunatic block connected with the penal establishment serves for the treatment during indefinite periods not only of criminals who have become insane and of insane persons who have committed crimes, but also of lunatics who have shown dangerously violent tendencies in other asylums. It is suggested that this arrangement has not worked very satisfactorily at Waldheim, the explanation apparently being that the medical administration of the lunatic wing is unduly influenced by the lay authority of the prison. On this account the author is opposed to having such institutions used for the prolonged detention of insane patients of any class so long as the prisons with which they are connected are not under medical control and government; and this view appears to have commanded the support of the alienists who took part in the discussion. Regarding the other possible plans for meeting the difficulty created by this class of insane patient, the author very reasonably concludes that the choice between special criminal asylums and special blocks in ordinary asylums must be decided by the conditions in each locality. The former plan will be suitable in districts with a large industrial population, while the special blocks will be found sufficient in rural populations. Whatever system is adopted, it is urged that the criterion for bringing patients under these special means of control should be their distinctly dangerous disposition, and that no regard should be had to the pedantic consideration whether they had or had not been legally labelled as criminals.

W. C. SULLIVAN.

*Sexual Offences and Diminished Responsibility* [*Sexual delikt und verminderte Zurechnungs fähigkeit*] (*Psych.-neur. Wochensch.*, December 25th, 1909.) Näcke, P.

In an earlier number of the same periodical appeared a paper by Fischer on "Responsibility in Incipient or Doubtful Mental Disorder," in which sexual offences (among others) were considered. Fischer maintained that if a person of sound mind was affected with an abnormally powerful libido sexualis and committed an offence, his increased libido could not be pleaded as a ground for a diminution of the legal penalty incurred, "inasmuch as in a person of sound mind no mental disorder can be induced by an increased libido." Näcke accepts the latter statement as true, but disputes the former. He considers that inasmuch as *any* strong emotion may diminish or completely overpower self-control, the same is true of the sexual impulse. Hence in a sane person diminished responsibility may be pleaded on the ground of abnormally powerful libido sexualis. In the paper already quoted Fischer had written, "Experience teaches us that in persons whose sexual desires are directed to abnormal ends, libido is no more powerful than it is in those whose sexual desires are normally directed. Even if in such cases libido was greater, the inhibiting influences offered by



society and its laws to the gratification of abnormal desires is greater. It follows from these considerations that those who, in other respects mentally sound, have inherited pathological sexual tendencies, are fully responsible for all their actions." As Näcke remarks, it is fairly obvious that Fischer has in mind the offences of homosexuals; and Näcke asks, Has Fischer any first-hand knowledge of urnings, and, if so, of how many? It seems as if his knowledge cannot be extensive, since, in the first place, those with inverted sexuality are not *necessarily* the subjects of a pathological mental state. At most *quâ* homosexuality they are abnormal, and perhaps even we must regard inverted sexuality as a normal variety of the libido to which a minority are subject. And it is by no means proved that sexual inverts are more often psychopathic and degenerate than the heterosexual. Näcke's own impression, at any rate, is that this is not the case. He goes on to say that he is in agreement with others who have a large first-hand knowledge of urnings in believing that these, as a rule, have a libido which is exceptionally powerful and makes its appearance at an earlier age than in the case of heterosexuals. If these beliefs correspond with the facts, diminished responsibility could justly be pleaded on behalf of homosexuals who have committed sexual offences. Urnings are well aware of the existence of Section 175 in the German Criminal Code (<sup>1</sup>); they are also aware of the social obloquy they incur, at any rate in cultured circles of society, and yet these hindrances often prove insufficient. It is, in fact, unjust, says Näcke, to demand, under penalty, sexual abstinence from urnings, when no such demand is enforced upon heterosexuals.

M. EDEN PAUL.

<sup>1</sup> "Unnatural vice between two persons of the male sex . . . is punishable with imprisonment . . . and loss of civil rights."

## 6. Asylum Reports, 1908.

*London County.*—The report of this authority presents, as usual, many features of interest, and, we think, of general use. It extends now to over 300 pages.

The increase in total numbers resident at the end of the year is a little more than that of the preceding two years, but it does not come quite up to the average increase of the last twenty years. This last number reminds us that, with the Council itself, the Asylum Committee has now attained its majority, and we venture to congratulate the body on being able to look back on its work during that period with much satisfaction. It began with much activity and determination; now it has arrived at marked virility of administration. It may be that here and there are things which do not commend themselves to all, but it cannot be gainsaid that it has aimed, successfully on the whole, at procuring the most beneficent treatment for the unfortunates whose care is confided to it. Referring again to the increase in the insanity of the area, while, as said, the asylum increase is less than the average, the total increase is over 20 *per cent.* more than average, the Metropolitan Board Asylums having nearly three hundred more residents than in the previous year. Notwithstanding this, the Committee adheres to its former opinion that

there is no evidence to support the contention that the disease is more prevalent than formerly. The lessened death-rate, which is the certain outcome of improved sanitation and care, with more comprehensive registration being in its opinion the real causes for increase. Still, the yearly increase is again becoming proportionately greater, and the Committee has felt compelled to get on with the eleventh asylum, to be built from the plans of Mr. Clifford Smith.

Mention is made of the proposed mental hospital, originating in the munificence of Dr. Maudsley. As was foreseen when this idea was first mooted twenty years ago, much difficulty arises in connection with procuring a suitable site, having regard to the essential elements of a clinique and out-patients' department being attached to the hospital but doubtless the difficulty will disappear in good time.

The number of re-admissions in the course of the last fourteen years is prodigious, being no less than 28 *per cent.* of the admissions, and about 40 *per cent.* of them returned within a year from discharge. The Committee may well say, as it does, "that the term 'recovery' in connection with discharge does not in a large number of cases indicate radical cure." No doubt there is some justification, as, indeed, there is temptation, for regarding relief from a manifestation of existent insane diathesis rather than relief from the diathesis itself as a recovery, but such huge divergence from the approximate rate of 4 *per cent.* of re-admissions for all England must to a considerable extent affect the value of statistics relating to recovery. We suppose that the difficulty of accurately separating diathesis from symptoms led the Statistical Committee to abstain from offering any suggestion for the definition of the term "recovery."

Alien lunatics have given the Committee much to do. They can be deported by order of the Home Secretary if within twelve months of their arrival, and if it is certified by a magistrate that, within three months of the commencement of proceedings against them, they have been in receipt of parochial relief. Several cases have been thus treated, while others have been deported by their own friends, and two have been deported, on the order of the Home Secretary, by the shipping companies bringing them into the Kingdom. Some years ago we drew attention to the drastic action in such cases taken by the immigration authorities of the United States. It is satisfactory that the same practice has been established in the United Kingdom. Germany is the chief country from which the cases came. Legal difficulties, pointed out by the Local Government Board, foiled the attempts of the Committee to return Scottish and Irish patients to the country of their origin.

The Committee is at great pains to inform the friends of patients that if the full rate of maintenance is paid their relatives can be placed on the private list, the Committee having found out that in many cases such full cost is paid to the Guardians. Several availed themselves of the offer, but many others could not pay the board in advance, this being a *sine quâ non*. In some cases, too, the Committee has been able to recover some addition to the maintenance rate, to go towards capital expenses. The rate for the private wards is only 16s. 11d., but admission to them is rightly reserved for London patients only.

A considerable amount of space is given to a review of the report of the Royal Commission on the Feeble-Minded. This will be read with interest, seeing that it is the result of combined medical and lay opinion, with much administrative and scientific experience behind it. The general view of it is one of cordial approval, with a full recognition of the immense task set before the community if the recommendations are to be fully carried out. Beyond a clear exposition of the guiding principles which dictated the proposals, we note the following points. The Committee is much in favour of the power being given to the Asylums Committee, etc., to co-opt members to itself, such members having no voice in the control of expenditure. The Committee urged this view on the Poor Law Commission, apparently without success. The Committee thinks that there is much work which such co-opted members could usefully perform in the direction of "visitation, discharging patients, and the supervision of a multitude of administrative details in connection with institutions for the mentally defective."

For ourselves, we regard co-optation with considerable suspicion. It is most useful where skilled advice is desired, as will be the case on the Board of Control, but it is not free from danger where executive responsibility is in question. We venture to think that among the honorary offices which are open to those who freely give their time to local government, none exceeds that of asylum visitor in requiring serious attention and regulation. We fail to see why responsibility to the taxpayer should serve to prevent a co-opted member exercising control over expenditure, while he is not debarred from exercising the very serious responsibility of discharge. If co-optation is to be practised we think that it should be compulsory, that is to say, that the delegating body should rule that the Committee must co-opt so many, so that everyone should know the exact size and composition of the body that is exercising control. The Committee will not commit itself to any opinion as to the usefulness of women as colleagues.

We are glad to note that the Committee is most anxious for co-operation between the education authority and the authority responsible for the mentally defective in regard to the children of the latter class, their views in this direction having been pressed on the Commission by Drs. Bond and Mott on its behalf. There is not much to be hoped for, perhaps, in regard to the bulk of infantile and juvenile defectives from education, however scientifically designed, but proper co-ordination will at least give more opportunity of removing from healthy children the baneful influence of moral aments, who are more numerous, probably, than is suspected, and who do an immensity of harm.

Payment by fees for certification by the official certifying medical man does not commend itself to the Committee, who would prefer that official to be salaried. This would be following experience in Glasgow and other places, where it has worked well.

Some objection is taken to the addition of a third Government authority to the two who already have an opportunity of reviewing the Committee's proposals in regard of new buildings, in so far that it gives more opportunity for delay, which has been found, not only by the the London Committee, to be very annoying. It would, of course, be

very inimical to the idea of unity in provision for the insane if one building had to be submitted to one set of authorities and another to a different set. There is something in the point made by the Committee, that a County Council is itself the building authority under various acts, and might be trusted to carry out its own proposals; but, after all, some County Councils have been held to be a little extravagant in their notions of what asylums should be, and it saves much odium if the final voice in expenditure is given to a strong central authority.

In the matter of diet some rearrangement has been made in the relative quantities of various articles given. Following experiments at one or two individual asylums, a general order has been issued permitting the Medical Superintendent to reduce the meat and vegetables of the diet sheet, substituting therefor more pudding. This has been found to increase satisfaction and to decrease waste, and, indeed, expense. At some of the asylums the plan has been tried in respect of staff diet, with the same good results. This success endorses the feeling which is becoming more general, that we all eat too much meat, and it seems to be well worth following up.

Turning to the copies of the Commissioners' reports at the various asylums, we note the following points: At Banstead they remark that it is possible to contrast on the spot the efficiency of the earlier buildings with those of a recent villa-form type, and find the advantage to lie with the latter where space is available. They advert to the benefits conferred by the Queen Adelaide Fund, out of which patients, when discharged as recovered, receive a grant to help them over the first return home if their means are meagre. If the fund is not able to make the grant some help is given out of the profits made by supplying patients' friends with tea when visiting. They commend the practice to other institutions. The introduction of mat-making, etc., and a printer's shop at Horton are noted, the introduction being accompanied by economical success.

In the reports of the medical superintendents we find the following matters of interest: At Bexley Dr. Stansfield is confident that in cases of alcoholic heredity, when the father has been the drinker, the type of insanity shown in the child tends to an unstable, impulsive, and explosive nervous organisation, such as obtains in epilepsy, hysteria, moral and impulsive insanities, and in certain forms of paranoia. When the fault is with the mother, it leads to the impeding of mental and physical development, resulting in idiocy, imbecility, or mental enfeeblement. This may, perhaps, be summed up as the alcoholic father tends to hand on functional disturbance, the mother producing organic defect, and it is no doubt true in the main, but we think that it cannot be stated as a general rule unless some account be taken of the duration of the alcoholism in each parent. Is not a man who from continued drinking reduces himself to a mere sot likely to beget something little better than himself as far as intellect is concerned? This consideration of time is of interest in connection with the recent dicta of Dr. Karl Pearson as to the progeny of drunkards. An occasional or temporary drinker stands on a footing *qua* powers of transmission entirely different from that of the persistent self-debaucher. Dr. Stansfield claims that



syphilis should be a notifiable disease, and its communication a punishable offence.

Dr. Robert Jones makes a neat point :

It is often advanced by certain critics that the amount of drink taken individually by many of those admitted into asylums is exceedingly small, and that this is confirmed by the rarity and even absence of cirrhotic and fibrous changes discovered in the principal organs in these cases after death, and therefore it would be erroneous to consider insanity as caused by excessive drinking. The same critics affirm that the principal units in the so-called recovery list of asylums are the drink cases, and that if these cases were eliminated or treated elsewhere, there would be no recovery list at all ! Both of these statements cannot be true, but they show to what specious arguments prejudice can deviate reason.

Fifty cases of lumbar puncture have been performed, which are to be reported on by the Pathologist. The report cannot fail to be of the greatest interest, possibly of great value.

At Long Grove Dr. Bond has been making large use of the continuous warm-bath system, and hopes for opportunities of being able to carry this on by night as well as by day, so as to make it really continuous. A report of the results will be very valuable. In the male verandahs tubercular and some other patients are kept by night as well as by day.

*Bovine tuberculosis.*—The importance of this has been much before the public of late; and ever since the opening of Long Grove a persistent and vigorous effort has been made to obtain a herd free from tuberculosis—a goal by no means easy to accomplish. The herd, which numbered fifty-two on March 31st this year, was started by the purchase in June, 1907, of five cows certified as having then satisfactorily passed the "tuberculin test"; three of these, however, subsequently developed tuberculosis. In the following month further cows were purchased, and to these and to all the ninety-six cows subsequently bought the test has been applied in the sheds here before the completion of purchase. This has involved the sending back of no less than fifty-five cows as having failed to pass the test. If our sources of purchase may be assumed to be at all representative, these figures imply that at least 36 *per cent.* of young milking cows in the country are infected with tuberculosis not recognisable clinically—a surely most serious fact from a public health point of view.

In the report of the Epileptic Colony Dr. Spark writes :

The line of demarcation between the sane and the insane is probably more indefinite in epilepsy than in any other form of insanity, and in accepting some of the statements made in the admission certificates, one cannot help suspecting that the picture of the patient's mental state is sometimes painted in somewhat lurid colours in order to relieve the infirmity, and to secure institutional treatment for one who is rarely a bread-winner and often a burden. When once admitted, a lengthy period of observation is necessary before determining that continued detention is no longer justified under the lunacy law, and before recommending a discharge, home control, environment, and prospect of employment require very careful consideration.

By the operation of the Employers' Liability Act the difficulty of obtaining permanent work for the epileptic has been greatly increased, and perhaps the prospect might be brightened if some degree of contracting out were possible.

#### *Metropolitan Asylums Board.*

The enormous work connected with the various asylums and homes directed by this body is carried out with just as much earnestness as if its apotheosis had not been announced by the Commission on

the Feeble-minded. A strong authority will be required to do the work as well, and certainly none will excel in the admirable and progressive spirit which has guided the hand of the Board. We might go further and say that the carrying out of the comprehensive scheme laid down for future dealing with defectives will be made the easier by the persistent endeavours of the Board to utilise, in one way or another, mental capacity, however restricted. Valuable experience has been gained not only in ascertaining what is worth doing, but also what is useless to attempt. The work of the staff is no doubt dull and depressing as a whole, but some bright spots must be found in improving results by developing useful labour. The nature of the medical work no doubt has made it more and more difficult to secure sufficient candidates for appointment, and the Board was led to promulgate the subjoined conditions after consultation with their medical superintendents.

For a considerable time the paucity of candidates for vacant appointments on the medical staff at the asylums had become very noticeable and unsatisfactory. Several reasons were advanced by the medical superintendents of the managers' asylums which in their opinion accounted for the unpopularity which appeared to attach to these appointments, and these reasons were fully discussed with the medical superintendents.

In the hope of attracting a larger number of suitable candidates for these positions it was decided:

(a) That it was desirable that a standing order which required assistant medical officers in the asylums' service to be annually re-elected after the third year of office should be rescinded. (This the managers did on March 14th.)

(b) To recognise the principle that senior assistant medical officers might marry and be permitted to live off the asylum estate. (Three of the officers have availed themselves of this privilege.)

(c) To modify the restrictions in force as to the number of visitors who could be received in one year.

(d) That applications for future posts of assistant medical officers in the asylums' service should be made through the medical superintendent concerned instead of through the Clerk to the Board.

We have not yet had sufficient opportunities of judging whether these alterations in the regulations will achieve their object.

*Tooting Bec Asylum.*—The burden of the medical care and of the nursing required here is well shown by the fact that the deaths numbered 262, the average on the residence being 37 *per cent.* for men and 26 for women. The average ages at death were 69 for the former and 74 for the latter. 158 of them were due to senile decay.

*Leavesden.*—The deaths here were not far off the general average of asylums, *viz.*, 7.52 for the men and 8.61 for the women. Senile decay accounted for 14 out of the 156 deaths. An outbreak of scabies among the females caused considerable trouble, but was eventually conquered.

*Caterham.*—The deaths here too closely approximated the general average, being 7.6 *per cent.* Dr. Campbell complains bitterly of the sensational attacks made in the Press on "walking parties." His experience is that complaints from the outside are rare, while on the other hand he finds that frequently kind acts have been done to parties when outside the asylum.

*Darenth Asylum.*—Here the death-rate reached the abnormally low figure of 3.00 *per cent.* Eighteen patients were discharged, of whom Dr. Rotherham writes that they should have been kept under observa-

tion in an institution, particularly in such as had means for teaching in school and workshop. He hopes for the passing of legislation some day whereby it will be made possible to detain them. Dr. Rotherham is the apostle of work in asylums, and the following shows what can be done.

At the Franco-British Exhibition, which was open between May and November, space was allotted in the British Educational Section to the Local Government Board, and, at their request, an exhibit of articles made by the patients in the Industrial Colony and Training School was sent up from this Institution. At first the space for exhibits given to Darenth was so small that there was little prospect of successfully showing off the numerous articles, but eventually, owing to the courtesy of Mr. Hoare, of the Local Government Board, a larger space was obtained, which, though still not nearly large enough, enabled a fine show to be made. Some 700 articles, entirely made by patients from six years of age upwards, with enlarged photographs of the inmates at work, were extremely well arranged by the craftsman, to whom great credit is due for the thoroughness and energy with which he undertook this, to him, novel work, the result being highly satisfactory. A great deal of attention was devoted to our exhibit by thousands of visitors interested in education, the only one in the exhibition which showed what can be done in an institution for mentally deficient people. A visitors' book was kept in which visitors might enter their names and record their impressions. Over 2,600 entries were made by people from all over the world, and their remarks showed their surprise that such an exhibit made by mentally deficient people was possible, and their thankfulness and gratitude for the work which was being carried out by the Metropolitan Asylums Board and the staff at Darenth.

The Visiting Commissioner noted in his report :

It was impossible not to be impressed by the interest which most of those employed took in the various branches of work on which they were occupied. I was much struck with the various forms of education that were being imparted to the different grades and classes of children in the schools.

A debtor and creditor account is kept of each of twelve trades at which patients work, and this, after full allowance is made for the wages and expenses of the teachers, adds up to a total of over £2,100. To this may safely be added a very considerable amount for the value of the improvement in health and conduct of those engaged, finding its account in the less cost of care and management.

We must congratulate the Board on having adopted the Statistical Tables of the Association. Some of the medical superintendents speak hopefully of their future usefulness. It may be pointed out that as long as only the County Asylums thus dealt with their figures, it has been impossible to examine any point of interest affecting the total insanity of London. The work of shifting over the system must have been enormous, and must be the more admirable in view of the threatened disestablishment of the Board. Of course considerable difficulty must arise in following up inquiries in consequence of the frequent interchange of patients between institution and institution belonging to the Board, notably between Tooting and other asylums, but steps have been taken to minimise the inconvenience.

The most memorable work done by the Board has been in relation to that large and unsatisfactory body of juvenile deficiency which is debarred the enjoyment of the ordinary means of education, that body which fills, unless properly provided for, industrial schools, workhouse wards, reformatories and, later on, prisons and the streets. Homes

and colonies now afford better means, and those instituted by the Board may well provide examples to be followed when the great change comes over the system of caring for defectives. As mentioned in former reviews, these have been organised and provided with efficient expert medical supervision.

All but one of these homes are medically supervised by Miss Turner. She finds, of course, that many of the inhabitants are beyond hope of substantial improvement, but with regard to others apparently the continued use of appropriate treatment and training is bearing good fruit. Improvement, however, in the case of the girls raises very serious questions, which would not arise if there were no prospect of discharge. She is forced to the opinion that in spite of a bettered mental condition it would be best, not only for others, but also for themselves, if discharge were long delayed or altogether suspended. Here are her views of the nature of the employment that best tends to improvement :

Still another cause contributing to greater improvement in the multiplication of occupations suited to every variety of mental capacity. Objection has been taken to this very thing, it being argued that one thing done well would be better than many done indifferently. But this objection misses the real purpose of the occupations, which is not only to perform work, but to educate the capabilities of the girls by means of work. The members of the Colony represent very varying powers, and hardly half a dozen are capable of deriving the same amount of advantage from the same employment. The *desideratum* is something that every one can do, from the most intelligent to the least intelligent, and only a variety of employments can supply this diversity. It would be a move in the right direction to introduce new and different occupations, as, for instance, straw hat-making in all its branches, as the preparation of the straw involves processes, such as splitting, plaiting, and mangling, which can be performed by the most unintelligent. In the straw hat-making districts very little children are often seen engaged in these very simple occupations, which are at once interesting to perform and involve a minimum amount of labour. On the other hand, for the strong, robust members of the Colony it would be advantageous to have more out-of-door employment; even the more laborious occupations connected with gardening could be performed by them, and, as before suggested, instead of the few head of poultry kept there might be a fairly large chicken farm, which would afford useful and interesting occupation to the members of the Colony.

Dr. Rotherham has the supervision of the Industrial Home at Witham, accommodating about 130 boys. All the boys now attend school, but the teaching consists almost entirely of object lessons, the three "Rs" being discounted as entirely useless and wasteful of time to teachers and pupils. In the training-shop 8,224 pairs of boots were repaired for the inmates of other homes, while the tailoring is as successful, affording to some of the boys opportunity of showing real skill in making garments of all kinds. A band of twenty-two performers has attained such merit that they have been able to play at entertainments outside the home.

Reading these reports from year to year, we are struck with the constant devising and trials of new outlets for the exercise of such mental capacity as is preserved to patients. Experiments, mostly successful, establish new points of treatment, and in this respect the Board and its staff are entitled to much gratitude for paving the way to better things.

The Report of the Commission on the Feeble-Minded tends, of course, to remove all this great work from the hands in which it now is. It is



not to be expected that the Board should view the recommendations of the Commission in a spirit of acceptance, though it speaks of the Report with respect. The Board being by far the most important exponent of differing opinion, we think it right to reproduce at some length its arguments.

The Report of the Commissioners contains a voluminous and exhaustive survey of the whole field covered by the wide terms of the reference to them, while the Commissioners also published in six large blue books the minutes of evidence which they received from 248 witnesses, with the reports of medical investigators and the report on the visit of certain Commissioners to America. These volumes contain a wealth of information on most important questions dealing with the mental, moral, and physical well-being of the community.

We are, of course, specially concerned with the views and recommendations of the Commissioners with regard to the care of the feeble-minded and of non-imbecile epileptics, and we think it well, as some of these recommendations have an important bearing on this branch of our work, to refer to them in this place, though of necessity only very briefly.

In the preamble to their recommendations, the Commissioners place in the foreground the important reservation that "it is not intended that the maintenance at public expense of the mentally defective, or of epileptics not mentally defective, should be extended to those who, either at their own cost, or at that of their relatives or friends, can be otherwise suitably and sufficiently provided for." At the same time, we find nothing in the report adverse to the view which we have long expressed, and which was supported by the Chairman of the Board in his evidence, namely, that public provision should be available for all classes of mentally defectives, subject to payment of the cost in whole or in part, according to means, by the relatives of the patient. The difficulty experienced at present is that, speaking generally, a patient must either be a pauper to secure admission to an institution maintained out of public funds, or sufficiently wealthy to pay the comparatively large fees required by even the least expensive of the voluntary or private institutions. There appears to be at present no middle course.

With regard to London, the Commissioners discussed fully the work of the Metropolitan Asylums Board and the London County Council, and their recommendations are that, notwithstanding any existing statutes, the proposed general Act for the care and control of the mentally defective should provide that, in the case of the administrative county of London, the institutions of the Metropolitan Asylums Board should be transferred to the London County Council for the use of its Statutory Committee for the care of the mentally defective, on whom the duty to make suitable and sufficient provision for the care and control of the mentally defective in the Administrative County of London will by the said Act devolve. The Commissioners, having already decided that in the country in general the Poor Law authority cannot suitably undertake the care of the mentally defective, and that this duty should devolve upon the county authority, remark that they find no point of difference in regard to London which would lead them to recommend for it a scheme different from that which they recommend for England generally. They appear, moreover, to have been impressed (1) as regards the imbecile work, by the complaints of the London County Council that the Asylums Board have not kept pace with the need for imbecile accommodation, and that the pressure falls more and more upon the former body (who provide for lunatics), and less and less upon the Asylums Board; and (2) with regard to the feeble-minded, by what they call the institutional disorganisation as to the mentally defective, by which phrase is indicated chiefly the fact that in London the Asylums Board provide accommodation, while the Council educate a considerable section of the feeble-minded, as well as to the fact that the Council also provide some residential homes.

It is not germane to our report to deal with the first point, however much open to argument it is, though we may mention that the Commissioners speak of the "very clear and enlightened policy of the Board" with regard to the imbecile work, and one Commissioner refers to the Board as "a progressive and efficient local lunacy authority."

As to the second point, we may say that this duplication of authority, so far as the Board's feeble-minded cases are concerned, will only apply so long as the small residential homes in London are maintained, and that the Commissioners' own conclusions point to the replacement of these homes by larger settlements. They say that "probably in the future more reliance will be placed upon the education of these children at an early age, and often continuously, in colonies like that at Darenth and Sandlebridge, than in scattered residential homes." Again, as to the utility of special schools and classes, reference is made to the fact that it is estimated that in London from 5 to 10 *per cent.* of the children are moved into ordinary schools and do well, that some 45 *per cent.* at most "do manual work well and are of fair intelligence as regards ordinary matters of life," and are considered capable of earning their own living altogether, or to a material extent, and that some 50 *per cent.* are suitable for permanent detention. At Birmingham, as the result of seven years' investigation, only 19·8 *per cent.* have been wage-earners at all, and only 3·9 *per cent.* earn as much as 10s. a week.

The Commissioners conclude that "the result of this survey confirms the opinion that the special school or class is to be regarded rather as incidental to a general organisation of industrial and institutional training than as of main or ultimate importance in itself. This conclusion is far-reaching. If it be accepted, the special class or school as part of the elementary education of the country does not remain a central point of organisation round which an industrial and institutional system should be organised. The latter becomes incidental to its working and development."

Thus the special class, except as a kind of sorting-house, must, equally with the scattered residential homes, give way in the future to the complete self-contained colony such as Darenth.

As the most suitable local authority for the care of the mentally defective, the Commissioners appear to have made their choice between the Poor Law authority and the County Council in favour of the latter, quite apart from the question of the likelihood of profound changes being made in the administration of the Poor Laws in the next few years. The fact that the Royal Commission on the Poor Laws will shortly issue its report, and that this report must inevitably deal alike with the future of Poor Law work, with the constitution of the Poor Law authority, and with classification, finance, and other questions, make it almost inevitable that consideration of the proposals which we have briefly reviewed will be taken side by side with those of the Poor Law Commission. Till that time, therefore, might be left further consideration of the problems as to whether the care of the mentally defectives, a work which is wholly institutional in character, should be undertaken by a body differing from that which will in future control the institutional work of the Poor Law, and as to whether the needs of London are of such a character as to justify a departure from any scheme approved for the rest of the country.

We must confess that, having regard to the unwearying work done by the Board, our sympathies are very much with it in this question, but logic, if not practical convenience, points, we fear, to its being transferred to the other authority to be created, if the Commission's Report is carried into effect. Whether we regard defective juveniles as lower grades of insanity or simply as abnormal forms of pauperism, there must be a dividing line between the duty of caring for the insane and that of caring for pauperism. The fixing of that line is by no means easy, but the controlling element will be found to be education. The more that success attends the attempts to improve defectives by training the more will education assert its importance in dealing with such young people. It would seem, therefore, to be appropriate that the care of them should be in the hands of those who are charged with education, and these hands are to guide the care of the insane as well. It seems logical that one body should have the duty to educate all, from the brightest of brains down to the lowest stages of intellect. It seems equally logical that one body

should have the care of all defectives, from the acutest of maniacs down to the most pronounced instances of mental deprivation. Mental insufficiency must be the test rather than pauperism. But its personal application will be difficult both in the cases of these juveniles and of the old people whose bodies outlive their brains.

*Some Scottish Chartered Asylums.*

*Crichton Institute.*—The energetic inquiry into the pathology of insanity is a point of the utmost importance in the view of both the committee and Dr. Easterbrook. They are collaborating for the provision of a first-class laboratory on the estate. No doubt much valuable result will be forthcoming from the independent mind of Dr. Easterbrook. We note that a new term has been chosen for what are now called "direct" cases. Dr. Easterbrook defines them as "receptions." We fail to see any advantage in the substitution. The latter term suggests nothing but coming in, and in default of applied definition might easily be taken by the casual reader to cover all admissions. The term "direct" at once challenges inquiry as to its meaning. Statistics here are quite incomparable with those of the Association, and, indeed, with those of any other institution. The scheme of tables is entirely silent on the matter of ætiology. But we note that in the classification Dr. Easterbrook has no sympathy whatever for toxins or auto-toxins. These important, not to say fashionable, factors are not thought worthy of giving their name either to a cause or to a classification except in respect of alcohol. This appears in the definition of dipsomania, defined as insane impulsion for alcohol. Stupor and katatonia, linked together, constitute one "form." No other form of stupor is recognised. This rather adds to the complexity of the question of dementia præcox. There is plentiful evidence of the continuation by Dr. Easterbrook of that restless quest for improvement that has marked the Crichton since its inception, and we foresee that Dr. Easterbrook's originality of thought and method will be found a valuable asset of the institution.

*Gartnavel.*—The venerable term of "Royal Asylum" is endangered by the march of medicine. It is now wished that the Institution should be known as the Glasgow Royal Mental Hospital. So may it be! The Chairman at the General Meeting rightly adverted to the number of voluntary admissions (which appear in the last three years to have constituted 33 *per cent.* of the new cases) as evidence of the alteration in the public mind on the nature and treatment of insanity, and also of the care and skill shown by the medical staff.

The directors expect in the near future to take part in establishing in the West of Scotland a well equipped laboratory and institute, where the complex problems of the diseases of the mind may be worked out by specially trained pathologists. Many new methods of research and treatment have of late years been devised, and the Directors are desirous that every possible means of recovery or alleviation shall be available to the patients committed to their care.

Dr. Oswald is hopeful about general paralysis. He says that while hopes recently raised concerning its causation by a micro-organism still

lack confirmation, yet the investigations now carried on by many skilled workers may lead to a cure being discovered. The amount of good that such an institution can do for the poorer of the middle classes is shown by the fact that more than one third of its population pay £40 only, while a seventh part pay less than £40.

*The Murray, Perth.*—Dr. Urquhart supplies yet another table of causal factors. It certainly more nearly approaches that suggested by the Statistical Committee, in that it supplies a larger amount of correlation. We note one particular item "neuropathic heredity denied." Is this term of sufficient accuracy to be ranked with admitted heredity? Beyond the mere possibility of intentional lying, there is the common occurrence of a man not being wise enough to know his own grandfather, and especially all his own uncles and aunts. Further, many families get split up as time goes on, and anything may occur to one member without others hearing of it.

Dr. Urquhart enters a strong plea for the maintenance, in all its efficiency, of the Scottish Asylums' Laboratory. As we have noted above there are signs of activity in the direction of laboratory work elsewhere, and we may be excused for entertaining some apprehension that this activity may be perhaps disruptive rather than constructive. We should most earnestly deprecate anything like the former. If we recollect accurately the old king when he wanted to show the benefits of union sent for sticks and bound them together. He was not foolish enough to show the benefits of union negatively by sending for a bundle of sticks to unbind and break them one by one. Scotland led the way in uniting; it should keep the lead by maintaining one national institution supported by all, as far as possible.

## Part IV.—Notes and News.

### THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

A QUARTERLY MEETING was held at 11, Chandos Street, Cavendish Square, London, W., on Tuesday, May 24th, 1910, Prof. W. Bevan-Lewis, M.Sc., President, in the Chair.

*Present:* The President and the following sixty members: T. S. Adair, H. T. S. Aveline, Fletcher Beach, G. S. Blandy, C. Hubert Bond, D. Bower, R. Campbell, J. Chambers, S. Clarke, Maurice Craig, W. R. Dawson, J. F. Dixon, T. O'C. Donelan, A. R. Douglas, T. Drapes, J. H. Earls, F. W. Edridge-Green, W. Graham, T. D. Greenlees, W. H. Haslett, R. D. Hotchkiss, D. Hunter, Robert Jones, R. Langdon-Down, N. Lavers, J. R. Lord, W. H. C. Macartney, C. Mercier, J. H. Macdonald, M. E. Martin, J. Middlemass, A. Miller, C. S. Morrison, C. M. Murrell, H. Hayes Newington, L. R. Oswald, S. R. Philipps, Bedford Pierce, H. E. C. Quin, D. Rice, N. Raw, W. Rawes, H. Rayner, G. H. Savage, G. E. Shuttleworth, A. Simpson, R. Percy Smith, J. G. Soutar, J. B. Spence, T. E. K. Stansfield, R. H. Steen, R. C. Stewart, R. J. Stilwell, W. H. B. Stoddart, J. D. Thomas, T. Seymour Tuke, J. Turner, A. R. Urquhart, W. Vincent, and F. Watson.

Apologies for absence were received from Drs. Fennell, P. W. MacDonald, Nolan, Outtersson Wood, A. R. Turnbull, and others.



Attendance at previous Council Meeting: T. S. Adair, H. T. S. Aveline, W. Bevan-Lewis, C. H. Bond, Robt. B. Campbell, J. Chambers, W. R. Dawson, W. Graham, H. Hayes Newington, R. D. Hotchkis, Robert Jones, C. Mercier, A. Miller, L. R. Oswald, R. Percy Smith, H. Rayner, R. H. Steen, W. H. B. Stoddart, A. R. Urquhart, W. Vincent, and H. Wolseley-Lewis.

#### THE DEATH OF KING EDWARD VII.

The PRESIDENT remarked that before the business of the meeting was commenced he had a very painful function to perform, namely, to refer to the very serious calamity which happened to our land on the fateful 6th May. None could dissociate themselves from the great wave of universal sorrow which swept over the Empire to its remotest confines on the passing away of King Edward. All felt that a great moral, social, and political force had passed away from our midst; and those belonging to the medical profession must be only too keenly conscious of the irreparable loss which had been sustained in the passing away of so princely a spirit. No monarch of recent times had ever identified himself so intimately, so earnestly, so sympathetically, and, at the same time, so personally with the welfare of the profession, with the advancement of progressive medicine, and with the best interests of those most noble philanthropic institutions, the great hospitals of the Metropolis. King Edward's Hospital Fund—to mention only one matter in particular—would ever remain an undying testimony to the wondrous instincts he had, to his wise forethought, and to his keen interest in the lot of suffering humanity. His royal dignity, his more than diplomatic tact, his keen earnestness in the cause of universal peace, had won for him the plaudits of the world. None the less, along with his Royal Consort, he was, above all other things, the people's friend. He asked members present to rise and pay silent homage to the memory of the greatest royal personality of the age, the record of whose life was really enshrined safely in the affections and in the memories of his people.

The meeting acquiesced by silently rising in their places.

#### AN ADDRESS TO THEIR MAJESTIES.

The PRESIDENT said that another subject, arising out of the preceding matter, had to be referred to. He had to announce that the Council considered the question of doing what was done on the occasion of the death of Queen Victoria, namely, sending a vote of condolence and sincerest sympathy with their Majesties the King and Queen, the Queen-Mother, and the other members of the Royal Family. He proposed from the chair that that be done, coupled with Members' own tribute of loyalty and affection to the Crown.

Dr. G. H. SAVAGE seconded, and it was carried by members upstanding.

The following gentlemen were elected members of the Association, Dr. Stoddart and Dr. Hotchkis acting as scrutineers:

Thomas Peter Conlon, L.R.C.P.&S.Irel., Resident Medical Superintendent, District Asylum, Monaghan. Proposed by W. Ireland Donaldson, Charles Rolleston, and C. Hubert Bond.

Michael Henry Downey, M.B., Ch.B.Melb., L.R.C.P.&S.Edin., L.F.P.S.Glasg., Assistant Medical Officer, Parkside Asylum, Adelaide. Proposed by W. L. Cleland, H. Hayes Newington, and C. Hubert Bond.

Hector Duncan MacPhail, M.A., M.B., Ch.B.Edin., Assistant Medical Officer, Gosforth Asylum, Newcastle-on-Tyne. Proposed by J. T. Calcott, A. M. Dryden, and C. Hubert Bond.

Richard Caldecott Monnington, M.D., Ch.B. Univ. Edin., D.P.H.Edin., Medical Superintendent, Laverstock House, Salisbury. Proposed by James M. Rutherford, P. W. Macdonald, and H. G. S. Aveline.

Oscar Phillips Napier Pearn, M.R.C.S., L.R.C.P.Lond., L.S.A., Assistant Medical Officer, London County Asylum, Horton, Epsom. Proposed by John R. Lord, Samuel Elgee, and David Ogilvie.

Robert Walter Joseph Pearson, L.R.C.P.&S.Edin., L.F.P.S.Glasg., Assistant Medical Officer, London County Asylum, Claybury. Proposed by Robert Jones, C. T. Ewart, and G. H. Harper Smith.

Gayton Warwick Smith, M.D.Lond., B.S.Durh., D.P.H.Cantab., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Middlesex County Asylum, Tooting, S.W. Proposed by H. Gardiner Hill, R. Worth, and C. Hubert Bond.

#### MINUTES OF LAST MEETING.

The minutes of last meeting having already been printed and circulated in the Journal, were taken as read and were duly confirmed.

#### INSPECTORS IN LUNACY (IRELAND).

Dr. DAWSON said that the Irish Division, at a special meeting which was called by the sanction of the President last week, unanimously sent forward a resolution asking for the Association's assistance in bringing before the Irish Government the importance of appointing inspectors in lunacy who had the proper sort of training and experience for filling so important a position. He therefore brought forward for acceptance the following resolution:

"That in view of the importance of the forthcoming appointments, to the positions of Inspectors of Lunatics, to the welfare of the insane in Ireland, this Association should take steps respectfully to bring under the notice of the Irish Government the eminent desirability of having particular regard, in making such appointments, to the selection of candidates who are thoroughly conversant, by training and experience, with the administration of lunatic asylums and the practical treatment of the insane, and that the President be empowered to take such steps as he may think fit to that end."

The Association could not, of course, know who had entered for the posts, but he did not see that the course now suggested could do harm, and on the other hand, it might very likely do good. It would lead to the views of the Association being brought before the Irish Government.

Dr. G. H. SAVAGE seconded the resolution.

The PRESIDENT said that the matter was a very important one, and it might be that members would wish to express their feeling upon it. He asked those present to further the end in view, which he regarded as an extremely desirable one, and empower him to send a deputation to the Chief Secretary for Ireland, to represent the views so expressed.

Agreed.

Dr. CHARLES MERCIER read a paper entitled "Insanity as Disorder of Conduct." It excited a lengthy and spirited discussion, in which Drs. SAVAGE, STODDART, STEEN, DRAPER, URQUHART, DIXON, BEDFORD PIERCE, LANGDON DOWN, RAYNER, and the PRESIDENT took part, and to which Dr. MERCIER replied.

This was followed by a paper by Dr. JOHN TURNER upon "The Examination of Cerebro-spinal Fluid, with Special Reference to the Diagnostic Value of Ross and Jones's Test." It was briefly discussed by the PRESIDENT and Dr. BOND.

The meeting was brought to a close by an enunciation by Dr. STODDART of a "Theory of the Toxic and Exhaustion Psychoses." It was discussed by Drs. SEYMOUR TUKE, BEDFORD PIERCE, and the PRESIDENT, to whom Dr. STODDART replied.

In consequence of His late Majesty's death the customary Dinner was not held.

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#### MEDICO-PSYCHOLOGICAL ASSOCIATION.

#### SOUTH-EASTERN DIVISION.

#### SPRING MEETING.

The SPRING MEETING of the South-Eastern Division was held by the courtesy of Dr. Percy J. Baily at the London County Asylum, Hanwell, W., on Tuesday, April 20th, 1910. Among those present were Drs. R. R. Alexander, Percy J. Baily, W. H. Bailey, David Bower, C. Hubert Bond, J. Francis Dixon, A. W.

Daniel, H. Devine, S. C. Elgee, Francis H. Edwards, T. D. Greenless, S. J. Gilfillan, F. Edridge-Green, J. W. Higginson, David Hunter, H. E. Haynes, P. G. Kennedy, E. S. Littlejohn, T. S. Logan, H. Wolseley-Lewis, M. E. Martin, J. J. Murphy, H. C. MacBryan, J. Macarthur, A. S. Newington, J. G. Porter Phillips, R. A. Rankine, C. F. Rolleston, W. Rawes, J. G. Smith, T. E. K. Stansfield, J. Tattersall, F. Watson, the Rev. E. Hockley, and R. H. Steen (Hon. Sec.). Apologies were received from Drs. F. R. P. Taylor, H. J. Macevoy, E. S. Pasmore, T. Outterson Wood, D. G. Thomson, A. Bowles, R. H. Cole, Bernard Hart, and A. N. Boycott.

The asylum and grounds having been visited, the members were entertained to luncheon. At the termination of the lunch Dr. R. R. Alexander proposed a vote of thanks to Dr. Baily for his kindness in so hospitably receiving the Division. The meeting of the Divisional Committee was held at 2.15 p.m., Drs. Dixon, J. G. Smith, and R. H. Steen being present. The general meeting was held at 2.45 p.m., Dr. R. R. Alexander in the chair.

The minutes of the last meeting having been printed in the Journal, were taken as read and confirmed.

The following members were elected to take office for 1910-1911 :

Hon. Sec. of the Division, Dr. David Hunter; representative members of the Division on the Council, Drs. David Bower, J. Francis Dixon, Frederick R. P. Taylor, and David G. Thomson.

Dr. HUNTER thanked the Division for the honour they had conferred upon him in electing him to the office of Divisional Secretary. Dr. BOWER, in thanking the Division for electing him as a representative member on the Council, expressed the hope that the time would not be far distant when the Chairman of the Parliamentary Committee would *ex officio* have a seat on the Council.

Dr. WOLSELEY-LEWIS proposed, and Dr. EDRIDGE GREEN seconded, a vote of thanks to Dr. R. H. Steen for his services as Secretary to the Division during the five years in which he had held the office. This was carried unanimously. Dr. STEEN replied.

The following gentleman was elected an ordinary member of the Association: James Farquharson Powell, M.R.C.S., L.R.C.P., D.P.H., Medical Officer of Caterham Asylum.

Drs. Baily, H. E. Haynes, and Donelan were elected as members of the South Eastern Divisional Committee of Management, which now consists of the following:

Retire in 1911.	Retire in 1912.	Retire in 1913.
Dr. Seward.	Dr. Pasmore.	Dr. Baily.
„ R. H. Cole.	„ Greenlees.	„ Haynes.
„ J. G. Smith.	„ Peachell.	„ Donelan.

The invitation of Dr. Stansfield to hold the Autumn Meeting at the London County Asylum, Bexley, was unanimously accepted with much pleasure. October 5th, 1910, was fixed as the date of this meeting. The date of the Spring Meeting was fixed for April 25th, 1911.

#### CONTRIBUTIONS.

Dr. PERCY J. BAILY read the following paper, entitled "A Brief Historical Survey of Hanwell Asylum."

The history of this institution carries us back through a period of rather more than eighty years—that is to say, rather more than the life-time of those of our race who, by reason of strength, are able to reach the allotted time of three score years and ten.

But short as this period is historically, I think I may say without much fear of contradiction, that so far as the knowledge and treatment of insanity are concerned, the foundations of this asylum were laid in the dark ages. There were then but very few county or other public asylums in this country. Such as there were were generally small institutions, and in many, if not most of these, the insane were treated with scant courtesy. In some they were dealt with more like wild beasts than human beings, and were regarded as worthy neither of pity nor consideration, and those unfortunate creatures who raised their voices or battled against the

terrifying Phantasmagoria, conjured into their field of consciousness by disease, were subjected to equally terrifying influences which were brought to bear upon them under the guise of treatment.

It had been my intention originally to place briefly before you to-day an outline of the chief historical facts connected with this asylum up to the present time. When, however, I came to consider the subject, I found that the task of doing so satisfactorily and with any sustained interest was a very difficult one, chiefly because the events of each successive year were frequently mere repetitions of those of former periods. Moreover it appears to me that the most interesting period of the history of this asylum must be its earlier years (what I may call the Conolly and pre-Conolly days). I propose, therefore, to deal only with this period to-day.

The first definite step towards the erection of Hanwell was taken in November, 1827, when, under the Act of the 48th Geo. III Cap. 96, the Court of Quarter Sessions of the Peace for the County of Middlesex determined, after a leisurely deliberation which extended through no less a period than two years, that it was expedient to erect a lunatic asylum in that county for the reception of insane persons, and a committee of the justices was then formed, who should be the visiting committee of the asylum, with Col. Clitherow as chairman.

The first business of the committee was the issuing of advertisements in various newspapers which invited tenders of land for the site. The conditions were that the land should be not less than twenty-five acres in extent, it was to be in a healthy situation, and well supplied with water. Advertisements were also issued inviting plans and estimates for building the asylum, which were to be received by March 28th, 1828, and premiums of £200, £150, and £100 were offered for three of the plans presented which should be deemed to be the best by the committee.

Many tenders of land were received, and the committee finally decided upon a site consisting of forty-four acres near Hanwell Bridge.

The plan which was selected by the committee as being the best of the fifty-four submitted to them, and the one, therefore, which gained the first premium of £200, was that of William Alderson. This plan was accepted only in general outline, and was taken as a guide in the preparation of the final design. The plan as finally approved by the committee, on January 21st, 1829, was for a building capable of accommodating 600 patients, and its cost was estimated at £124,000. At an adjourned meeting of the Court of Quarter Sessions, however, on May 5th, 1829, the committee were authorised to enter into a contract only at a sum not exceeding £50,000 for the erection of an asylum for 300 patients. The original plans were therefore reduced and the estimate cut down, but even then the lowest tender submitted was £63,200 and this tender was finally accepted. The contract was signed on August 4th, 1829, and the building was to be completed on or before January 24th, 1831.

Ever since the first cart-load of bricks was thrown upon the site, building operations have been going on here, more or less continuously, and there appears to be no reason to suppose that they are likely to cease in the near future. As originally designed, however, the buildings were completed early in the year 1831, and the committee appointed Dr. (afterwards Sir William) and Mrs. Ellis from the Wakefield Asylum as superintendent and matron. Dr. Ellis's salary was to be £500 a year, that of Mrs. Ellis £100 with board, washing, and attendance; Mr. Quick was appointed as surgeon and apothecary at £70 a year. Dr. Ellis was authorised to engage the various officers and servants and male and female keepers in the proportion of one to every twenty-five patients.

The asylum was opened on May 16th, 1831, when forty-two patients were admitted. By July, 1831, the asylum was ready for the reception of 300 patients (the number it was originally designed to contain). Then commenced the process of stretching, for we are told upon carefully examining the establishment it was found that 200 more patients, making 500 in all, could be accommodated with great comfort. Much reluctance was shown at this time by the authorities of many of the parishes in the country to send in their patients, and the committee consequently decided in the autumn of 1831 to take measures to compel them to do so. Hence at the end of the first year, although there was accommodation for 500 patients, there were only 254 actually in the house.

In 1832 the committee appointed a consulting physician, Dr. (afterwards Sir



Alexander) Morrison, of St. James's Square, W., and a consulting surgeon, George Cooper, Esq., of Brentford.

In the autumn of 1832 cholera made its appearance in the asylum, but the outbreak was not of a very serious nature. Twenty-one patients—all females—were attacked, of whom eleven died. A second outbreak of the disease occurred in August, 1834, when the cases were confined to one ward on the male side. There were four deaths.

It seems extraordinary that these outbreaks of the disease should have proved so limited and so easily controlled when it is remembered that at this time of the asylum's history the sole source of the water supply was the Grand Junction Canal, which forms the southern boundary of the estate. At first the water was pumped direct from the canal into the service tanks, but it soon became recognised that the water was in a very impure state, and in 1833 a large filterer and reservoir were provided. So early as 1832 attempts were made to improve the water supply by sinking a three-inch bore-pipe. The boring reached a depth of 300 feet, and a supply at the rate of twenty-five gallons a minute was obtained, but owing to the immense quantity of sand which came up with the water the well proved to be practically useless, and the canal continued to be the main source of supply. In 1841 the canal company notified the committee that the supply of water from the canal must cease on March 31st, 1842, and the question of the water supply then reached a crisis. After consulting Mr. Isambard Kingdom Brunel, it was decided to carry out the suggestion of Mr. Harris, the resident engineer, to sink a well to the sand. The well was completed in June, 1843, and has since that time provided an abundant supply of the purest water.

By the end of the year 1835 there were 604 patients in the house. The additional accommodation for 104 beds had been found by converting a disused kitchen on the female side of the house into an infirmary, and by utilising the underground basements below this, and below the western tower, as sleeping spaces.

Owing to the gradual increase in the number of lunatics in the county the demand for beds became more and more urgent, and in 1837 it was decided to add 300 beds by building two additional wings.

It was at first suggested that these wings should run out in a northerly direction from each of the eastern and western towers, but this idea was fortunately discarded, and the wings were built in an easterly and westerly direction. The proposal to enlarge the asylum was vigorously opposed by the Vestry of St. George's West, one member of which was also a member of the Hanwell Committee, *vis.* the Very Rev. the Dean of Carlisle.

On April 25th, 1837, this vestry passed a series of resolutions strongly protesting against the contemplated expenditure of £20,000 for the extension of the asylum at Hanwell; one of these resolutions was as follows:

"That the Vestry accept with many thanks the offer of Mr. Galley Knight to move for a select committee of the House of Commons to inquire into the whole management of the lunatic asylum at Hanwell, and to bring under their consideration the apparently incorrect returns made by the order of the House of Commons by the medical superintendent of that establishment."

The matter did come before the House of Commons, but Mr. Knight's motion for a select committee was not carried. On June 30th it was resolved by the Hanwell committee that the consideration of the statements which had been made by one of the members for the northern division of Nottinghamshire should not be entered into. In the early part of 1838, in view of the approaching completion of the east and west wings and consequent increase in the number of patients, the committee appointed Dr. William Chapman Begley as medical assistant to the superintendent physician. They also, at this time, decided to make considerable alterations in the domestic arrangements for the future government of the asylum. These suggested alterations had as their immediate result the curtailment to a very considerable degree of the duties and authority of the superintendent, and, together with the knowledge that certain members of the committee were opposed to him, were the determining cause of his resignation, which he submitted in a letter addressed to Col. Clithero on February 5th, 1838; this letter was considered by the committee on February 15th, when a resolution was passed which was highly complimentary to Sir William and Lady Ellis, and which was expressive of the committee's deep concern that anything should have induced them to contemplate

resigning. Sir William was earnestly requested to reconsider his decision, and thus give the committee the satisfaction of opening the additional buildings under his and Lady Ellis's superintendence. In consequence of this resolution, Sir William wrote on February 19th to the chairman withdrawing his resignation. His letter terminated with the following passage: "We shall be most anxious to place the whole concern here upon such a plan as we doubt not will be satisfactory to the committee if they will permit us under their control to pursue the system and line of conduct which we have hitherto adopted."

Certain members of the committee lost no time in assuring Sir William Ellis that the conditions contained in the last paragraph of his letter, and upon which the withdrawal of his resignation must depend, would not be conceded unanimously by the committee, and on February 21st he wrote a letter to the chairman, in the course of which he says:

"We have come to the conclusion that although we have no doubt that the majority of the committee approve of the plans we have hitherto pursued, as expressed in the resolution of the 15th inst., and that we should continue them in opening the new buildings, yet that the hostility of two or three gentlemen of the committee who disapprove of the system altogether is so great, we could not reasonably expect anything but contention even during the short time which would be required for that purpose. Instead, therefore, of withdrawing my letter of resignation of the 5th inst., I beg to withdraw the one of the 19th inst. Perceiving now that no ultimate good can arise from our continuing, we have no spirit to set about such a task as that of arranging and appropriating the new building for the reception of patients. I have therefore again to request that the committee will adopt their own measures and supply our places as early as possible."

Sir William Ellis's resignation was accordingly accepted, and the committee advertised at once for the following officers:

A superintendent at a salary of £500 a year, with board, lodging, etc., a house steward at a salary of £250, with board, lodging, etc., and a matron at a salary of £200, with board, lodging, etc.

Dr. John Gideon Van Millingen was appointed physician superintendent on April 5th, 1838, among the fourteen unsuccessful candidates being Dr. John Conolly.

The period during which Dr. Millingen was responsible for the management of the asylum was a brief, but stormy one. His authority was not on all occasions upheld by the committee, and as a result the discipline of the place became very lax. At the first meeting of the committee after his appointment, he reported the new matron for countermanding certain orders which he had given to improve the cleanliness of the female wards. She was merely requested by the committee to co-operate with the superintendent "in the kindest spirit." Her subsequent conduct was such that the committee were compelled to dismiss her on July 16th, after being in the service three months. At the installation of her successor, Miss Powell, who proved to be a very capable officer, the committee had all the chief members of the staff assembled, and in introducing Miss Powell to them, expressed their anxious hope and expectation that all jealousies and disagreements among the respective officers of the establishment would from that moment cease.

The house steward, who was appointed at the resignation of Sir William Ellis, was called upon to resign in November, 1838, in consequence of gross irregularities in the keeping of the accounts, and at the same time Dr. Millingen was admonished by the committee to pay greater attention to the rules of the asylum relating to himself. Serious friction also arose between Dr. Millingen and Dr. Begley, in consequence of the former bringing certain charges against the latter which he was unable wholly to substantiate before the committee, but which undoubtedly had some foundation. In consequence of all these troubles it was resolved on January 10th, 1839, to appoint a special sub-committee to inquire into the efficiency of Dr. Millingen as superintendent of this institution. While the report of this sub-committee was still under discussion Dr. Millingen resigned, and it was arranged that he should relinquish his office in June, 1839. In March an advertisement for a successor to Dr. Millingen was inserted in several of the daily newspapers, and John Conolly, who had been an unsuccessful applicant when Dr. Millingen was appointed, again presented himself as a candidate for the vacant post, and was on this occasion selected by the Committee. The appointment was made on May 2nd, 1839, and he commenced his duties on June 1st.

It is not very easy to obtain anything like an accurate or detailed idea of the internal arrangement and general condition of the asylum which prevailed at the time when Conolly commenced his crusade against the employment of mechanical restraint, the few details which are available being found chiefly in Conolly's own writings. In Sir William Ellis's time there were two keepers in each ward. On the male side one of these was a mechanic, who, immediately after breakfast, left the ward "in charge of the other" while he went to his work in one of the shops, or about various parts of the house as the case might be. The man who was left in solitary charge of the ward was not allowed to leave it, except on urgent business, and before doing so he was to be very careful to see that he locked in their rooms, or securely fastened up any patient who was likely to become dangerous or excited. The majority of the male keepers were at this time paid £20 a year, while the wages of the female keepers varied from eight guineas to £13 a year. The men had one suit of clothes (not uniform) a year, but the women do not appear to have had any corresponding privilege, and Conolly notes that in some of the wards the nurses were worse dressed, and were much more wild in their appearance than the generality of the patients. Parties of working patients were sent out to work on the land without any attendant in charge of them and without any sort of supervision. In consequence of this it was only natural that escapes were very common. There was no night staff. It was customary for the attendants to do night duty in rotation, and on these occasions they continued on duty for twenty-four hours consecutively. This state of things was not remedied until early in the year 1854, when the commissioners urged the necessity of appointing a special night staff. The committee then appointed one night attendant for each side of the house. All the epileptics were every night, when they went to bed, fastened by one wrist to the bedstead by means of a strap, and it was the duty of the house-surgeon, as the assistant medical officer was then called, to see that this was done in every case when he paid his night visit to the wards. All patients who were faulty in their habits had only loose straw to lie upon; many of the female patients were clothed in trousers, and this custom was only abandoned in the year 1854.

The furniture in the wards was all of the heaviest and most clumsy description, the tables and most of the seats being immovable. There were seventy-five beds in which two patients slept together, but not very long after Conolly's appointment these were replaced by 150 single beds. The floors were all of brick or stone, and no sort of floor covering was provided for the patients to tread upon, there were no open fire-places, and the lavatory accommodation was in all wards most defective, in some, apparently, altogether wanting.

The plates from which the patients ate their food were of iron, and the forks were heavy, unsightly, and dangerous.

No infirmaries were provided in the original building, and in November, 1839, Conolly, speaking of the ward which was then doing service as an infirmary on the male side, says, "It is in the part of the building most remote from the kitchen, the surgery, and the medical officers, and is accessible only by passing through refractory wards. It has no fire-place or boiler for hot water. It possesses no day-room. To reach the airing-court the feeble and convalescent patients must descend three somewhat difficult staircases." Writing of this period in 1856, Conolly attributes many of the faults and defects which he found in Hanwell, described by the committee at the time of his appointment as a noble institution and a model for all others of a similar kind, to the practice of a too rigid economy which had been the fatal vice of the older institutions. An inadequate number of attendants, engaged at low wages and ill qualified for their duties, became among the first consequences. Disorders innumerable ensued—quarrels and fightings, and injuries and various accidents. Confusion often prevailed everywhere and escapes were of frequent occurrence. The cleanliness of the patients could not receive proper attention, their clothing was defective, and their diet too scanty. Deficient ventilation, which rendered several portions of the building unpleasant by day and most offensive by night, was the result of inattention which allowed almost countless panes of window glass to be replaced by squares of tin and iron. Scarcely any proper arrangements existed for the sick.

Conolly's advent was almost immediately followed by a marked improvement in the general discipline and condition of the place. He at once entered heart and soul into the task which he had set himself of abolishing all forms of mechanical



restraint in the treatment of the patients, and on June 13th, less than a fortnight after he assumed the responsibilities of his office, he reported to the committee the necessity, in his opinion, of engaging two additional keepers of each sex, stating that some increase was essential as a means of promoting greater order in the wards and airing courts, as well as among the patients employed out of doors, and generally the more systematic substitution of moral for physical restraint.

By the end of September he had increased his staff by the addition of nine attendants—five male and four female.

I must here ask your indulgence to allow me to make a digression in order that I may recall to your mind certain facts with which you are familiar as to the origin, as well as the magnitude, of the task which Conolly had undertaken. It is, to our way of thinking, astonishing that, so recently as seventy years ago, there should still have been a blind and persistent opposition to the abolition of a system of the grossest and most barbaric cruelty which had for centuries blotted the fair name of medicine, in so far as it was concerned in dealing with a certain class of the insane.

By long-continued usage and custom this system had assumed the stamp of authority, and was regarded with heartless callousness by those who not only gave it their assent, but actually regarded its substitution by a more humane system as chimerical, dangerous and ridiculous. There was little advance in the methods in vogue during the few decades that immediately preceded Conolly's work in Hanwell upon those which had been employed any time during the previous 2500 years. If anything, perhaps, during the late eighteenth century and early nineteenth century, the callousness and harsh neglect meted out to the insane by their sane guardians had become greater and more reprehensible than had been the case in earlier times. But rather over forty years before Conolly's work there began to be exceptions. At the Bicetre, Pinel commenced a crusade against these barbarisms in France in 1792. At about the same time a movement began to be set on foot in England by William Tuke, which four years later resulted in the opening of the Retreat at York. Here, without any knowledge of Pinel's work in France, the same ideas were practised in perhaps a more complete manner. It is to the Retreat at York that belongs the honour of being the spot in England where the light was set up, which ultimately shed its beneficent beams first to Lincoln, then to Hanwell, and so over the whole of this Kingdom, and thence over Germany, Switzerland and the whole world. But in its early days it was but a faint glimmer which had a hard struggle for existence, and so we find that even so late as 1828, when Mr. Gordon's Bill became law, the conditions under which many of the insane dragged out their miserable existence were too horrible to contemplate. During the deliberation of the Middlesex magistracy, which immediately preceded their determination to erect this asylum, Col. Clitherow and others made a personal investigation into the conditions under which the insane paupers of the county were actually existing. It was found that in one private asylum near London several of the patients were chained to the walls in dirty, dark, damp and offensive rooms. They were visited by a medical man once a month, and in the interval they were left to the tender mercies of a brutal keeper, a part of whose equipment was a long-thonged whip. When night came and put an end to each dismal day they were chained in their cribs, and throughout the whole of Sunday (this being a day of rest for the keepers) they had thus to remain. Their morning toilet, except on Sunday, when there was no toilet, consisted in their being driven out into a yard, where they were sluiced down in a tub, often when the ice had formed over the water. Soap was too precious an article to be wasted on these miserable wrecks of humanity, and one towel a week was allowed for the use of 170 patients. Seventy out of about 400 patients were invariably in irons. No wonder that the magistrates of Middlesex deemed it expedient to erect an asylum for the county.

For many years before he came to Hanwell, Conolly had taken a lively interest in matters connected with asylums and the management of the insane. His graduation thesis at Edinburgh in 1821 was on this subject, and he had been connected with the Warwick Asylum, to which he held the appointment of "inspecting physician," both during his residence in Stratford-on-Avon between 1822 and 1827, and again when he removed from London to Warwick in 1830. In 1828 he was appointed professor of medicine in University College, London, and



while he held that chair he published in 1830 his *Inquiry concerning the Indication of Insanity, with Suggestions for the better Protection and Care of the Insane*, in which he raised his voice against the abuses which were then being committed.

Eight years after the publication of this book, on June 21st, 1838, Gardiner Hill, who since 1835 had been house-surgeon at the Lincoln Asylum, delivered a lecture at the Mechanics Institute, Lincoln, "On the Management of Lunatic Asylums." In this lecture Gardiner Hill showed that Dr. Charlesworth, who, since the opening of the Lincoln Asylum in 1821, had been its visiting physician, had for some years been gradually diminishing the amount of mechanical restraint at the asylum, where in 1829, owing to the fact that a patient had died during the night in consequence of having been strapped to the bed in a strait waistcoat, a rule was established that whenever restraint was used during the night an attendant should be continuously present in the room. It was soon found that the constant supervision by a suitable attendant of such cases as were formerly supposed to require restraint, entirely did away with its necessity.

Gardiner Hill's lecture, which was published only a month before his appointment here, had a powerful effect upon Conolly, and immediately after his appointment he visited Lincoln Asylum, where he was able to see for himself the practical application of the non-restraint system, and he found no difficulty in enlisting the sympathy of Mr. Serjeant Adams, one of the members of the Hanwell visiting committee, who was much interested in the proceedings at Lincoln. On commencing his official duties here he was very deeply impressed with the sense of his responsibilities. His anxiety to avoid the abuses which he had so freely condemned in 1830 was largely mixed with solicitude as to the dangers to be incurred in the attempt to abolish all restraint in an asylum containing so many patients as did Hanwell. He felt, however, convinced that what had been done at Lincoln might also be accomplished at Hanwell, and ten years later, in one of his annual reports to the Committee of this asylum, he says: "For my own part, in what has been undertaken, or in what has been accomplished, I trust I have never shown a desire to over-state it. I have always acknowledged myself indebted to Dr. Charlesworth and Mr. Hill (of Lincoln), for the original suggestion of managing the insane without restraint."

The publication of Gardiner Hill's lecture in April, 1839, had naturally attracted considerable attention in the asylum world. His views were almost universally received unfavourably, generally in a spirit of hostility or ridicule. Hanwell was no exception to this rule, but the agitation consequent upon the re-awakening of this question must no doubt have had some effect in causing those who were at the head of affairs at that time to give some thought to the matter, and, therefore, in all probability tended to produce some modification, however slight, in the infliction of restraint here. It is, however, impossible to form any accurate idea upon this point, for no sort of record was kept as to the number of patients who were under restraint, or of the kind of restraint used, until such a record was commenced by Conolly on July 1st, 1839.

The employment of restraint was left entirely to the discretion of the attendants, who had unlimited licence in the matter. The risk that such licence would be abused would be great even in our own time, but in the pre-Conolly days must have been infinitely greater, when attendants as a class were literally, as they were then called, "keepers ill-paid, poorly fed, untrained, and grossly ignorant, and obviously must only very exceptionally have possessed those qualities of soul which nowadays are recognised as so desirable in them." Conolly tells us that closets full of instruments of restraint were at their command, and it was impossible for the resident physician to know either by day or by night how many patients were actually in bondage. There is no reason to suppose, however, that this abuse ever reached the vast proportions in Hanwell which had been the general rule in the public and private asylums of England previous to the parliamentary inquiry into the subject in 1814 and 1815. It seems likely that during the troublous times which followed the resignation of Sir William Ellis the employment of restraint became more general than had been the case in the earlier days of the asylum's history, for Conolly notes the fact that during the single year that Dr. Millingen held office the number of instruments of restraint had been increased.

The only record of the actual number of patients under restraint on any given day, previous to July 1st, 1839, is found in September, 1835, while Sir William

Ellis was absent on leave. Dr. Morrison, who was then doing duty for him, reported to the committee on the 5th of that month that four men and eight women were constantly restrained, while fourteen men and five women were subject to occasional restraint. There were at this time 591 patients in the asylum.

Sir William Ellis was undoubtedly most anxious to limit the use of these instruments of torture as much as possible. He fully realised the cruelty which their employment involved, for he was a man of kindly feeling and benevolent disposition. In the introduction to his book, published early in the year 1838, speaking of the treatment of the insane he says: "The moral treatment is by far the most difficult part of the subject. In this the most essential ingredient is constant, never-tiring watchful kindness; there are but few even amongst the insane who, if a particle of mind be left, are not to be won by affectionate attention; an attempt must be made day by day, and for weeks together, and no discouragement must be felt even if the end is not accomplished"; and yet, even he was firmly convinced that mechanical restraint was essential in the treatment of many cases. He invented a special kind of canvas sleeves which, while undoubtedly more humane than the iron shackles and leather muffs which were then in constant use, effectually trussed up the patient so that it became quite impossible for him to move his arms, and he also dilates upon the advantage of the "arm chair."

But when Conolly came to Hanwell the kindly precept of Sir William Ellis had already been forgotten, and the harsher methods advocated, or at least defended by his successor, had become the common practice. It is not, perhaps, surprising, therefore, that at this time the use of restraint had become much more general, and to find that it was by no means limited to cases of violent mania. Instruments of restraint were so abundant in the wards as to amount when collected together to no less than 600 in number, half of which were leg locks or hand-cuffs, and these were applied by the attendants for the most trivial reasons. On the female side of the asylum alone no less than forty patients were constantly secured by various kinds of hand-cuffs, muffs, or leg locks, or were fastened in coercion chairs. Hence Conolly found that the medical and other officers of the asylum were not among the supporters of the new system, but on the contrary were distinctly antagonistic towards it. They had grown accustomed to witness patients, on the slightest indication of giving trouble, being strapped by the waist to benches or tables, or manacled by the feet to gratings, or bars, and Conolly, in a special report to the committee in September, 1840, complains that throughout the whole of his anxious task he had received no efficient aid from the medical officers, while from the attendants, who had been accustomed hourly to practise cruelties with impunity, he met with sullen disobedience or artful deception. He had the constant and zealous aid of one officer alone—the matron—and he deeply regretted that her industry and devotion had only exposed her to the insult of the officers most disposed to embarrass himself in every direction.

On July 1st, 1839, one month after Conolly came to Hanwell, the total number of patients under restraint was twelve—nine women and three men. This number rose on the 6th to eighteen—fourteen women and four men—but after this date the number gradually declined, and never reached double figures after July 11th. On August 12th only two men were under restraint, and after this date until September 20th no female and never more than one male patient was restrained on any one day. After September 20th all restraint was definitely and permanently abolished.

It will not be out of place briefly to review for a moment the methods of treatment which Conolly advocated and adopted.

It is quite clear from his various reports that he was a very great believer in the efficiency of seclusion, and this was his sheet anchor in his crusade against restraint. He speaks of it in the highest possible terms of praise, although he acknowledges that even it may be abused. Leeches and blisters were freely used. When blisters were applied a kind of waistcoat made of ticken without sleeves, and fastened by two or three small locks instead of buttons, was put on the patient in order to prevent him from interfering with the blister. In cases of unmanageable excitement the head was shaved, and tartarised antimony ointment was applied to the scalp. In order to prevent increasing the ulceration of the scalp which was thus produced by interference on the part of the patient, a ticken cap, the lower part of

which was made of elastic cloth, was tightly fastened on the patient's head by means of a small lock. The shower bath was in very frequent use, and Conolly remarks that by this means a paroxysm of excitement very seldom failed to be subdued. From Conolly's description of this mode of treatment one is almost disposed to think that the paroxysm was subdued by the patient being half drowned. We are told that the bath should be efficient and not liable to interruption.

"It should be suspended when the patient appears to be overcome and instantly renewed when symptoms of violence recur. A strong shower continued even for a minute has sometimes considerable effect, and it is never many minutes prolonged without careful observation of the patient's state. After four or five applications of this kind the patient becomes entirely subdued." Conolly naïvely remarks that "A bath of this kind appears to produce a moral as well as a physical impression." Conolly was not a believer in drugs, and in one of his reports he says, "The pride of medical science is disconcerted by the reflection that mere medicine has had but a small part in the cure of many patients who have left the asylum well." In his first report he states that tables were in preparation to show the asserted but doubtful influence of the moon's changes on some of the phenomena of insanity and epilepsy. I do not know whether he arrived at any definite conclusion on this particular subject for I can find no other reference to it in his later reports.

In July, 1840, Conolly reported to the committee that in his opinion the medical staff might be reduced to one house-surgeon and a dispenser. It was accordingly arranged that the services of Dr. Button should be dispensed with on January 1st, 1841. This reduction in the staff was resolved upon in spite of the fact that there were at this time 849 patients in the house. Button had not readily fallen in with Conolly's ideas, and from certain correspondence which appears in the minutes of the meetings at this period it is quite evident that the relations which existed between Conolly and his junior assistant medical officer were not very cordial. That this fact influenced Conolly cannot, I think, be doubted, for early in September Dr. Button was appointed superintendent of the Dorset County Asylum, and on the 29th of that month Conolly, who was then ill, wrote to the chairman that on reflection he was convinced that the services of an active, efficient, and faithful medical officer on each side of the house would be required to enable him to conduct the asylum to the satisfaction of the visiting magistrates. It was then resolved to advertise for a successor to Dr. Button.

The chief point of interest connected with this incident is that among the candidates for this vacancy was that very Robert Gardiner Hill, of Lincoln Asylum, whose lecture on the management of lunatic asylums two and a half years before had so impressed Conolly. The choice did not, however, fall upon Gardiner Hill.

In 1842 Conolly gave his first clinical lectures. The proposition to make use of the material here for the purpose of clinical instruction at first met with considerable opposition from the committee, who were fearful as to the effect the presence in the wards of even a moderate number of strangers might have upon the patients. This opposition was overcome on the understanding that the numbers should be limited, and it was decided that each of the hospitals in London should be invited to nominate one student. Eleven students attended the first course, and at its conclusion they presented a most eulogistic address to Dr. Conolly. One of the signatories of this address was Richard Quain.

In 1843 the committee adopted a revised set of rules, one of which required that the resident physician should devote his whole time to the duties of his office and should not professionally attend any private patient. Conolly at once intimated to the committee that it was most unlikely that he could comply with the restrictions included in this rule, and he was to report later on the matter. This he did in September, when he definitely informed the committee that as far as he was concerned it was quite impracticable for him to abide by this rule, and he suggested that he should continue his superintendence as physician but should be non-resident.

This suggestion was adopted by the committee on the following conditions: He was to attend at the asylum twice in every week for six hours on each occasion. He was also to attend the meetings of the committee and to be liable to be called upon on every occasion of emergency and to watch over the general interests of the asylum as heretofore. For these services he was to receive a salary of 300 guineas per annum. He soon found, however, that his agreement to spend six hours



consecutively in the wards on two days a week became a task far too trying and exacting to be continued, and in 1845 he wrote to the chairman of the committee stating that he believed no medical officers in any other institution undertook to be actively engaged for more than two or three hours in succession, and that the duties of a medical officer in the wards of an asylum were particularly fatiguing. It was therefore agreed that his visits should be of four hours' duration on three days a week.

In consequence of these arrangements with Dr. Conolly, the committee, after much deliberation and discussion, decided to dispense with the services of the house-steward and to appoint a lay governor. This person was to be the principle officer of the asylum and was to be responsible for its control and management. He was to be responsible to the committee for the general conduct and behaviour of all the officers, ward attendants and servants in the asylum, and was to visit every ward at least once a day, and should if he so chose accompany the physician and other officers in their visit to any part of the establishment. He was to have full and entire authority as to the classification, instruction, and management of the patients, both male and female. He had other duties assigned to him both multifarious and impossible. The experiment did not prove to be a successful one. The gentleman who was appointed was an army officer. He commenced his duties on March 11th, 1844. Early in August of the same year his conduct and the manner in which he performed his duties formed the subject of inquiry at a special meeting of the committee, when it was resolved that he should be called upon to resign, on the understanding that his duties here should cease at the end of three months. Owing, however, to further indiscretions on the part of the governor, his services were summarily dispensed with before this period had expired. The results of this experiment apparently convinced the committee of the impracticability of making a layman the principal officer of such an institution as a lunatic asylum, and no suggestion was ever made of appointing another officer of this kind.

Conolly resigned in June, 1852. The reason he gave for resigning was the increased demand made upon his time and his attention by his private professional engagements. It seems likely, however, that his state of health was such as to have had some influence upon him in coming to this decision. It was arranged that he should continue to visit the asylum up to Michaelmas, but in July he had to go away on leave owing to persistent attacks of neuralgic pain which continued to harass and trouble him, so that on August 11th he wrote from Brighton asking to be relieved immediately from further responsibilities connected with the asylum. The committee, therefore, continued his leave of absence until Michaelmas.

Subsequently to Conolly's retirement there were two resident medical superintendents here, one for the male side and one for the female side, a condition of things which obtained until some two or three years after the Asylums Committee of the London County Council became responsible for the government of the asylum.

I have already indicated that the original building was designed to accommodate only 300 patients. This number of beds was almost immediately increased to 500, and by gradual expansion and by utilising every possible available space not originally intended for that purpose as sleeping accommodation, the number of beds had been increased to over 900 when Conolly was appointed. In 1841, by converting the "back stairs of the western tower into sleeping rooms" and fitting up the basements under the centre tower as dormitories, the number of beds was still further augmented. In 1844 the committee resolved to build an additional asylum close to the present building. For this purpose a piece of land (that on which the temporary buildings now stand), was purchased from Earl Jersey in 1845, and plans were prepared for erecting a building capable of accommodating 1,010 patients. Fortunately for everyone concerned these plans could not be carried out before the passing of the Lunacy Act of 1845. The visiting justices of this asylum were not in favour of this Act and employed every possible means at their command of opposing it, including the presentation of a petition to the House of Commons. After the Bill had become law the Commissioners wrote and suggested that they would appreciate a meeting with the visiting justices, but to this advance the latter replied that so far as they could see no possible advantage would result from such a meeting. In accordance with the provisions of the new act the plans were sub-



mitted to the Metropolitan Commissioners in November, 1845. They were entirely disapproved of by the Commissioners, who reported adversely upon them to Sir Charles Graham, the Home Secretary. He concurred with the conclusions which the Commissioners arrived at upon the subject. One of the many objections of the Commissioners was the proposal to erect a building capable of accommodating 1,010 patients at so short a distance as 100 feet only from the present asylum. The idea was therefore abandoned, and the new asylum was erected at Colney Hatch. In 1852 the building of the present recreation room, originally intended and used for a considerable time as a chapel, was commenced, and below it a ward capable of accommodating fifty patients. These buildings were completed in 1854. In 1853 a suggestion was made that a third storey should be added to the building. Owing, however, to the strenuous opposition of the Commissioners, the suggestion was not immediately carried out, but in 1855 plans for increasing the accommodation on a still larger scale began to be discussed. These included the addition of a third storey and many other buildings, the total increase in the accommodation being estimated at 600 beds. These plans were also strongly opposed by the Commissioners, but the committee appealed directly to the Home Secretary, and after much controversy the Commissioners withdrew their active opposition. These additions and alterations were not completed until 1860, when it was found that instead of 600 additional beds it was possible to squeeze in 690. Thus on December 31st, 1860, the total accommodation was 1743 beds. Since that time there has been a still further expansion, so that now the number of beds is only about 400 short of 3000. I do not, however, propose to touch upon the history of the place beyond the period at which we have now arrived. I have already detained you longer than I had intended, and in concluding my remarks I have only to express my grateful thanks to you for having borne with me so long.

The subject which it has been my privilege to speak to you upon is, I am sure, one of very general interest; my only regret in dealing with it arises from the sense of my own short-comings, and the conviction that I have been unable to do justice to it.

In the discussion which followed, Dr. ALEXANDER, speaking as one who knew the records from which Dr. Bailly had obtained the material for his paper, stated that the preparation of this paper must have entailed very considerable time and trouble, and he had nothing but praise for the judicial selection displayed by Dr. Bailly. He hoped that the Hanwell Committee might be induced to print it, as it would form a valuable summary of the archives of the asylum.

Dr. BOWER, commenting on the appointment of visiting physicians to the asylum in the time of Conolly, expressed the hope that in years to come asylum officers would be enabled to keep more in touch with their medical brethren in the outside world. He believed that consultants should be appointed in connection with every asylum, so that in conference with the medical staff the patients might have the best treatment for every disorder. The converse was also in his opinion true, namely, that asylum medical officers should be permitted to give the neighbouring medical men the advantage of their special knowledge. This would be beneficial not only to the medical men but also to the patients under their care. He wished to thank Dr. Bailly for the very interesting paper they had heard. Dr. GREENLEES also spoke, and Dr. BAILY briefly replied.

Dr. H. DEVINE read the following paper, entitled, "An Account of the Clinic for Psychiatry at Munich."

In view of the fact that there is no similar institution in this country, it was thought that some account of the clinic for mental diseases, under the direction of Prof. Kraepelin, might be of interest.

A brief description of the institution will first be outlined, followed by an account of the post-graduate course which is given every year and extends over a period of three weeks.

The institution, which was opened on November 7th, 1904, occupies a site of two and a-half acres, presented to the university by the city of Munich. It is situated in a central position, in close proximity to various other clinics associated

with the university. The building, which is self-contained and presents an imposing appearance, consists of three sections—the out-patient department, the reception rooms and hospital and the laboratories for scientific research.

The central part of the ground floor is occupied by the out-patient department, consisting of examination room, bath-room for treatment and waiting room. On each side are four rooms for private patients, the quarters for the staff and the kitchen, stores and laundry.

On the first floor are the lecture room, receiving room for new cases, wards, laboratories and library.

On the second floor are more wards, with day-rooms, and on the third floor pathological, chemical and psychological laboratories. There are two gardens in which the convalescent patients are enabled to take exercise.

Everything possible that can be done for the comfort and efficient treatment of the patients on hospital lines appears to have been considered. The wards are bright and attractive in appearance, none of them accommodating more than ten patients. The various appointments are ingenious and elaborate. The telephones, water-valves and an arrangement for heating milk during the night are enclosed in locked-up boxes. A red electric lamp indicates a telephone call instead of the more usual disturbing bell. Heat is supplied by hot air from radiators and ventilation by flues in the walls. In order to secure efficient observation, lavatory conveniences are placed in each ward enclosed by portable screens. There is also a cupboard containing a glass, tooth-brush and soap for each patient. The floors are covered with a plain linoleum, which adds to the general appearance of comfort in the wards.

As regards the treatment, the fundamental principle is rest in bed combined with hydrotherapy. Bath-rooms, each containing four baths, are placed in close proximity to the wards, and seeing that many of the patients spend a large proportion of their time in them they are made as bright and attractive as possible.

Each bath has an automatic arrangement which prevents the water from rising in any circumstances above 60° C., and when it rises to 40° C. the fact is indicated by an electric lamp attached. While in the bath the patient lies on a meshed sheet, which is said to prevent any possible soreness arising.

The various means of treatment by electricity are fitted up in the out-patient department.

An important and noticeable feature of the clinic is the absence of single or padded rooms. All the patients are under continual observation, this obvious advantage being made possible in several ways. In the first place the small size of the dormitories affords every opportunity for individual supervision. Then there is the continuous bath treatment, which has great influence in quieting the restless and noisy cases. This largely obviates the use of sedatives, and these are not extensively employed. The most usual one is hyoscine, either alone or in combination with the warm bath.

Lastly, the use of cot-beds with padded sides would seem to be of considerable utility. Particularly are such beds advantageous in the case of restless seniles and general paralytics. These cases are always more or less a source of anxiety owing to their liability to injury, and for that reason frequently need the protection afforded by a padded room. With beds of this kind, however, it would appear that such patients can be quite as efficiently protected, with the additional advantage of being under the observation of a nurse the whole time.

On this question Kraepelin writes as follows (1): "Now if we wish to be able to give a complete account of the condition of all our patients at every moment, so must we before all abandon a method of treatment that until recently played a great rôle in asylums, and in consequence tended to be considered their distinctive peculiarity, *vis.*, isolation.

"If we confine a patient in a padded room, we have certainly shut him off from the ward, but we no longer know what his real condition is, though we listen to his cries or look at him through a peep-hole. One can no longer speak of the true nursing of the patient. The disadvantages of isolation, of which one need only mention the uncleanness, the destructiveness and violence, are so obvious that no one will return to it who has once known the blessings of its removal. Obviously if we abandon the locking up of excited patients, we must employ other methods of treatment. If we desist from sedatives, which we only regard as stop-gaps and

occasional aids, we have a procedure at our disposal that, in spite of its surprising simplicity and obviousness, has only been used to any extent in the treatment during the last twenty years, *viz.*, rest in bed."

In considering this question one must remember that here patients are being treated under ideal conditions, almost regardless of expense and number of staff, such conditions being hardly possible in their entirety in the ordinary county asylum. It represents, however, a line of treatment which can be, and is, largely carried out in this country. With plenty of fresh air, systematic baths and rest in bed, it is surprising how little necessity there is for isolation in side-rooms, and in those cases that would seem better apart from the distracting stimuli of a general ward, the use of portable screens affords all that is necessary for isolating the patient.

The laboratories afford every opportunity for scientific research on both the material and psychic sides of mental disorder. There is a well-equipped pathological laboratory, under the direction of Dr. Alzheimer, and seven rooms are devoted to experimental investigations in normal and abnormal psychology. They contain apparatus for the measurement of mental work, fatigue, association experiments, and for the study of the influence of mental processes on the pupils, heart, respiration and blood-pressure. There is a "silent room" with padded doors, and an arrangement for darkening, in order to shut out all sense stimuli; a "sleep-room" is also fitted up for the measurement of the depth of sleep and the study of the questions associated with the physiology, pathology and hygiene of the subject.

There is in addition to the above a chemical laboratory, in which investigations are being carried on in regard to the metabolic changes occurring in insanity.

Brief mention must be made of the lecture room, which is elaborately equipped for purposes of demonstration. It accommodates 120 students, and has excellent arrangements for lantern illustrations and an installation for continuous photographs. The room can be automatically darkened in a few moments, this being an obvious advantage, as most of the lectures are illustrated with photographic and other slides.

The medical staff of the clinic is made up of the following: The Director; one Oberarzt (principal assistant); four assistants; three volontaires; three clinical assistants; four scientific assistants. Seeing that there are only 120 beds in the hospital, it is evident that this staff permits of a very thorough study of the cases. The above list does not include the various lecturers and out-patient physicians.

The nursing staff consists of twenty-five sisters (nuns), ten nurses, and eighteen male attendants, the sisters supervising the nursing on both the male and female sides of the hospital. Each group of nurses takes night duty for two weeks at a time, with complete rest during the day.

The admission rate to the hospital is high, being from 1500 to 2000 per annum. The patients may be brought by the police or by their friends, and no certificate is required for admission. A large number of cases are therefore seen in the clinic which are not usually sent to the ordinary asylum. Thus a number of cases of alcoholic intoxication and delirium are brought in by the authorities, as also other toxic conditions, ether, and the like.

About 500 cases are transferred annually to the State asylum. The patients may discharge themselves or be taken out by their friends, unless considered unfit. About an average of fifty cases per week are treated in the out-patient department.

As has already been mentioned, the site of the hospital was provided by the City, and the cost of building and equipment was provided by the State, amounting altogether to £78,500. The expenditure is maintained partly by payments from patients and partly by grants from the State. The post-graduate course extended from October 25th to November 13th. It was attended by about sixty alienists from various countries. The course is most comprehensive, as will be seen from the following brief account.

Naturally especial interest is attached to the clinical demonstrations by Prof. Kraepelin. Some of these were the ordinary demonstrations for the students and others more advanced, especially designed for the post-graduate course. The former enabled one to obtain some knowledge of the methods employed in the teaching of psychiatry in Germany. In these classes two students are selected in

turn to examine each case, or else to state what they have observed after the essential features have been demonstrated by the lecturer from interrogation of the patient. In this way the method of examining a mental case and the significance to be attached to the various symptoms is practically demonstrated.

The cases discussed in the post-graduate class were either rarer types or those presenting some difficulty in diagnosis. It is obviously impossible to give any account of these in a brief communication, but one may perhaps mention an instructive series of cases diagnosed as manic-depressive insanity, illustrating the varied clinical picture which this psychosis may present. As some of them had been under observation for many years at one time and another the course of the disorder was admirably demonstrated. As might be expected, in the Kraepelin school the question of diagnosis receives much attention.

In addition to these demonstrations, Prof. Kraepelin gave a series of lectures on experimental methods in psychiatry—the measurement of the psycho-physical effects of drugs on fatigue, memory tests, etc.

Dr. Isserlin devoted six hours to the question of psycho-diagnosis and psycho-therapy. It included practical demonstrations of hypnosis and a full discussion of Freud's psychology and principles of psycho-analysis.

Dr. Rudin gave a series of most useful demonstrations on mental cases of forensic importance. The patients he brought forward included instances of misdemeanour in an epileptic state, murder by a paranoic, law-suit by a querulant, and homo-sexuality in old age. In addition, he gave six lectures on "The Causes and Problem of Degeneration."

Prof. Liepmann came from Berlin and gave a number of lectures on aphasia, apraxia and agnosia. They were illustrated by numerous charts, specimens and lantern-slides, as well as several excellent cases.

The lectures on the pathological anatomy and histology of the brain in insanity constituted one of the most noteworthy features of the course. These were given by Dr. Alzheimer, who covered the whole ground of the subject very fully. Each lecture was abundantly illustrated by means of the projection apparatus, with specimens and microscopic slides.

Dr. Plaut gave a course of lectures on sero- and cyto-diagnosis, dealing both with the theoretical and practical sides of the subject. He devoted his attention largely to the Wassermann reaction, and gave a practical demonstration of the method of performing lumbar-puncture.

Dr. Weiler, lecturing on clinical psychiatry, exhibited apparatus and instruments for testing reflexes, muscular power, tremors, and the measurement of pupils and blood-pressure.

Prof. Brodmann gave several lectures on his researches in the topographical anatomy of the brain, all excellently illustrated by the projection lantern.

Clinical demonstrations on neurological cases were given by Dr. Kattwinkel at the medicine clinic.

In addition to these lectures, a visit was paid to the Bavarian State Asylum at Eglfing. This institution accommodates 1,100, patients, and is built entirely on the villa system.

The last day of the course was more in the nature of a social event, being devoted to a visit to the charmingly situated asylum at Gabersee, some distance out of Munich.

Unfortunately this imperfect account gives but an inadequate idea of the clinic, which must be visited in order to obtain an actual appreciation of its various advantages. One cannot fail to be struck by the extreme thoroughness of all the work which is being carried on in the institution. Every effort appears to be made to investigate thoroughly the many obscure problems of insanity. Whether it be the clinical, pathological, psychological, or sociological point of view which is under investigation, the work is uniformly of high standard and the product of patient research. While, however, the purely scientific side is so highly developed, it is not done at the expense of the comfort and individual care of the patients, who have the benefit of every humane and enlightened form of treatment.

In concluding the paper, one may perhaps be permitted to give expression to a few reflections which naturally arise out of a visit to this famous clinic.

It is impossible not to be impressed with the somewhat anomalous fact that Munich, a relatively small town, possesses such excellent facilities for the study



of mental diseases, while London, the largest city in the world, has no institution of a similar character. Though one is able to recognise, without being accused of undue egotism, that the asylums in Great Britain are in general second to none both in comfort and in methods of administration, and while one also recognises that this country has always taken a foremost place in furthering the humane treatment of the alienated members of the community, it is impossible to shut one's eyes to the fact that the necessity for organised research in mental diseases is not at present sufficiently recognised, and that in this particular respect this country is far behind Germany, and, indeed, other countries, such as America. In enumerating the advantages of such a central institution, with a staff of experts in each branch of this department of medicine, a staff freed from administrative details, the possibilities it gives for post-graduate teaching and the scientific training of medical officers take a prominent place. In this way the fact will be accentuated that the administrative point of view, however important, is not the only one, and that the problems associated with mental disorder are such as merit and repay investigation.

In the next place it gives an opportunity for the study of the earlier phases of insanity, and that group of cases coming under the head of psycho-neuroses, hysteria, psychasthenia, etc. Since it is in such disorders that one is enabled to obtain the most insight into mental diseases generally, the necessity for their investigation is of paramount importance. Since, also, such cases are rarely seen in an asylum, and only isolated clinics for purely mental disorders exist in the general hospitals of this country, and then only in the out-patient department, it has resulted that comparatively little attention has been paid to these borderland cases. That those out-patient clinics which do exist at the present time are of considerable value is beyond question, and their further development is to be desired. They do not, however, satisfy all the requirements of cases of this type. While on the one hand it is highly undesirable that they should be sent to the county asylums, on the other it is necessary to be in a position to give them the facilities for indoor hospital treatment, both from the point of view of the benefit to the patient, and also from the opportunity which it affords for a more thorough investigation than is possible in a brief visit to the hospital once or twice a week. At present there are practically no facilities of this kind for patients of the class in question.

Lastly, but one would venture to say not least in importance, is the educative value such a clinic would have on the general public. To have easy access to an institution, carried on entirely on the lines of a general hospital, would without doubt do much towards dissipating any erroneous ideas which may still exist as to the methods of dealing with the insane. The patients at Munich are largely composed of those who come in and go out of the hospital for short periods. It would seem that the existence of such an institution where those who suffer from mental troubles may go to seek relief, just as those who are afflicted with bodily disease are enabled to do now, could not fail to be of the utmost benefit, both from an educational and social point of view.

(1) Kraepelin.—*Die Königliche Psychiatrische Klinike in München*, 1905.

Drs. STANSFIELD and STEEN criticised the paper, and Dr. DEVINE replied.

Dr. J. G. PORTER PHILLIPS read a paper upon the "Treatment of Melancholia by the Lactic Acid Bacillus" (see p. 422).

In the discussion which followed, Dr. BAILY read the following communication from Dr. Robert Jones, who was unavoidably unable to be present:

"I have tried the 'sour milk' treatment at Claybury in four males and four females. The cases were rather especially selected. The males were—one case of insanity with epilepsy, the others of melancholia. The urine in the male cases was examined, and in one only was there slight indican. Their fæces were examined by the pathologist before any of them went under treatment and their weights taken. Two men gained and two lost weight. The duration of the treatment was nearly three months, *i.e.*, February 7th to April 20th, but in one of the men I had to discontinue treatment after two weeks, as it was refused. One of the men was kept in bed for the first four weeks, and this case became more talkative about his hallucinations towards the end of treatment. One case has shown improvement,

but only after the treatment by sour milk was stopped, and no mental improvement took place in the other three. The fits of the epileptic continued to be of the same average in severity and number (about 100 fits per month). The milk was especially prepared in the laboratory under Dr. Mott from strains of the Bulgarian bacillus obtained—I think from the Lister Institute.

"*History of the female patients.*—Three cases were those of young girls, æt. 19 to 22, suffering from adolescent melancholia of the variety described as dementia præcox. One was in bed all the time of treatment owing to symptoms of pulmonary tuberculosis; another became noisy and excited a few days after treatment commenced. In none of the three was there any mental improvement. The fourth case, æt. 20 (adolescent insanity of the maniacal form), remained of the same weight at the end as at the commencement of treatment. At the commencement urine markedly phosphatic, no phosphates at the end. In this case there has been considerable mental improvement, which is believed to be due to 'Swedish drill' and 'skipping-rope' exercise as much as to the milk treatment.

"The method of administration in all cases was the addition of one ounce of 'soured milk' to a pint of fresh milk, as otherwise all would refuse it, and two pints a day were given, at 11 a.m. and 7 p.m. There never was any vomiting, but constipation attended the treatment. No diarrhœa occurred, but in two cases it is noteworthy that a scarlet rash—something midway between that of measles and that of scarlet fever—appeared in one, with hyperpyrexia lasting a week. This rash resembled that in septic intoxication, but it is not possible to connect it definitely with the sour milk treatment, although they *may* be related as cause and effect.

"The whole of this treatment, in my opinion, requires that a careful bacteriological examination of the fæces be made before treatment to note the streptococci, staphylococci, bacilli and bacteria, and these notes would have to be compared with a full examination after the treatment in order to show how completely the intestinal flora had been modified by the Bulgarian bacillus, which is supposed to "oust" the others and to appear itself in the fæces. I would not consider that conclusions could be reliable unless and until this had been done. Needless to say, I have given up this method of treatment: the results were not encouraging, and, as already stated, the stuff is anything but agreeable to look at or to taste.

"I wish to record my indebtedness to my colleagues, Drs. C. T. Ewart, W. S. Hughes, G. H. Harper-Smith, and F. Paine, for their notes and interest."

Dr. DIXON stated that he had treated several cases with milk containing the lactic acid bacillus, and mentioned a case of hypochondriacal melancholia in a woman, in which to his mind the results of the treatment had been strikingly successful.

Dr. GREENLESS also spoke.

Dr. PHILLIPS, in his reply, stated that the unsatisfactory results obtained at Claybury might be owing in some measure to the unsatisfactory type of case which had been chosen for treatment.

The members dined together after the meeting at the Cafe Monico, Piccadilly Circus, W.

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#### SOUTH-WESTERN DIVISION.

The SPRING MEETING of this Division was held, by kind invitation of Dr. Norman Lavers, at Bailbrook House, Bath, on Friday, April 29th, 1910.

The following members were present: Drs. Aldridge, Bazalgette, Blachford, Bullen, Kough, Lavers, MacBryan, MacDonald, Marnan, Morton, Mules, Nelis, Pope, and the Hon. Div. Sec.

There was also one visitor.

Dr. MacDonald having been voted to the Chair, the minutes of the last meeting were read and signed.

Dr. Aveline was re-appointed Hon. Divisional Secretary.

Drs. Glendinning and Lavers were elected to fill vacancies on the Committee of Management.

The date of the Autumn Meeting was fixed for Friday, October 28th, 1910, the selection of a place to be left to the Secretary.

The date of the Spring Meeting was fixed for Friday, April 28th, 1911.

The CHAIRMAN alluded in feeling terms to the loss the Association had sustained by the death of Dr. Manning, of Laverstock House, Salisbury, and the Secretary was requested to convey to Mrs. Manning the sympathy and condolence of the members.

Several letters of regret for non-attendance were read.

Dr. NORMAN LAVERS contributed "A Clinical Note" (see p. 499) dealing with a case in which, with vague organic sepsis, was connected a mass of hypochondriacal symptoms.

Treatment by methods of suggestion had met with some success.

In the discussion which followed some attempt was made to estimate the value of the organic changes, and the CHAIRMAN was disposed to regard these latter manifestations as also of a functional nature (and so rendering prognosis more hopeful).

Dr. BLACHFORD then read a paper on "The Function of the Optic Thalamus and the Corpus Striatum" (see p. 452), in which he proceeded to give his reasons from developmental, anatomical and pathological points of view, for regarding these ganglia, more especially the former, as important centres of Association.

The proceedings then terminated with a hearty vote of thanks to Dr. Norman Lavers for his hospitality, and to Dr. MacDonald for presiding.

A number of the members subsequently dined together at Fortt's Restaurant, Bath.

#### NORTHERN AND MIDLAND DIVISION.

The SPRING MEETING of this Division was held, at the kind invitation of Dr. Street, at Haydock Lodge, Newton-le-Willows, Lancashire, on Tuesday, April 19th, 1910. Dr. Street presided.

The following thirteen members were present: Drs. D. Blair, H. R. Cross, A. K. Douglas, E. Gane, C. K. Hitchcock, H. T. Mackenzie, G. E. Mould, P. G. Mould, N. Raw, C. M. Smith, C. T. Street, G. S. Williamson, and T. S. Adair.

There were also present as visitors—Drs. T. R. Bradshaw, A. Butler, A. G. Gullan, A. Hall, D. Harrison, C. T. MacAlister, and N. P. Marsh.

Apologies were received from Drs. W. Bevan Lewis (the President), Middlemass, Powell, Stewart and others.

The minutes of the last meeting were read and confirmed.

A ballot was taken for William Henry Coupland, L.R.C.S. Edin., L.R.C.P. Edin., Senior Assistant Medical Officer, Royal Albert Asylum, Lancaster. Proposed by Drs. Douglas, Blair and Adair as an ordinary member of the Association, he was unanimously elected.

Dr. T. S. Adair was re-elected Secretary to the Division for the ensuing twelve months on the proposal of Dr. Hitchcock, seconded by Dr. Nathan Raw.

Dr. G. E. Mould was re-elected, and Drs. Middlemass and Mackenzie were elected representative members of Council for the Division. Proposed by Dr. Hitchcock and seconded by Dr. Nathan Raw.

The kind invitations of Dr. Hopkins to hold the Autumn Meeting at the York City Asylum, Fulford, on Thursday, October 20th, 1910, and of Dr. Powell to hold the next Spring Meeting at the Nottingham City Asylum, on Thursday, April 27th, 1911, were accepted, and the Secretary was instructed to write and thank them. The Secretary was further instructed to ask Dr. Hopkins if Wednesday, October 12th or 19th, would be suitable for the meeting there, instead of Thursday.

#### CONTRIBUTIONS.

Dr. GANE read his paper: "Notes on the Treatment of General Paralysis by Means of Serum." He pointed out how the treatment by specific serum had been brought prominently forward by Dr. Ford Robertson, whose investigations led him to believe that the disease is caused by a micro-organism allied to the

diphtheria bacillus. Dr. Gane now wished to bring forward his experience of cases he had treated with the diphtheria antitoxin. The advantage of the serum is that it is standardised and the strengths are definitely graduated. The number of cases in which he tried the serum were six, all of which were general paralytics. The first four cases were disappointing, and the fifth could only have been changed by a miracle. In the sixth case after treatment the grandiose ideas and delusions left, and mentally the patient showed improvement. He believed that the temperature reaction, temporary excitement and alteration or improvement in the mental symptoms were probably due to some absorptive process set up by the serum and not to any specific action.

In the cases mentioned the disease was so far advanced, the probable permanent destruction of nerve-tissue so considerable, that little more than arrest of the process could be expected from the treatment and a transient change for the better.

The paper elicited an interesting discussion, in which a number of the visitors present took part. An interesting point brought out was the question of the diagnostic value of the serum in the early stages of general paralysis.

Dr. A. J. HALL, of Sheffield, read a paper on "Insanity following Carbon Monoxide Poisoning," quoting two cases occurring in the same house and under similar conditions.

The first was a woman, æt. 33, who was found unconscious in the bath-room soon after going for a hot bath. She showed most of the signs of CO poisoning, but there was no smell of gas and the "geyser" was turned off. By next day she had completely recovered.

The other case was that of her *fiancé* who had been staying a week end in the house and went to have a hot bath prior to going away on the Monday morning. On bursting open the door he was found unconscious, the room full of gas, the geyser full on, but with the light out. There was no doubt as to the cause, and the symptoms were typical; but instead of complete recovery the patient was dazed and confused, had loss of memory, and incontinence of urine and fæces. This condition continued practically unchanged up to the day of his death, which took place seventeen days after the poisoning.

Dr. Hall then discussed the question whether the mental symptoms were entirely due to the poison, or was the case one of suicide, there being some prior mental derangement.

The opinion of a professor of jurisprudence was quoted: "Whenever an obscure death occurs in a patient about to be married it is suicide."

Remarks on the paper were made by Dr. G. E. MOULD, Dr. CROSS, who described a case he had had under treatment, and others.

Dr. STREET opened a discussion on the question: "Are we doing as much in the form of treatment of mental disorder as we might do"? He said that the two points which prompted him to ask the question were: First, the general idea that nothing is done in the way of treatment in asylums; and second, that the recovery-rate does not increase. Though much has been written in the way of treatment of the insane, yet treatment does not appear to have yielded many results: the recovery-rate has not increased during the past thirty years. He advocated a higher form of moral treatment than the usual occupation, recreation and amusement; a more intimate knowledge of the mental condition of every patient, and particularly a more frank and open method of dealing with it. He believed in discussing a patient's mental symptoms freely with him, whether they were delusions or suicidal inclinations, and had found this method to yield good results, especially in cases of melancholia and alcoholism.

Several members took part in the discussion afterwards.

Dr. J. R. GILMOUR was unable to be present to give his paper.

#### SCOTTISH DIVISION.

A MEETING of the Scottish Division of the Medico-Psychological Association of Great Britain and Ireland was held at the Glasgow District Hospital for Mental Diseases, Gartloch, on Friday, March 18th, 1910.

The following members were present: Drs. Clouston, Baugh, Carre, Chislett,



Havelock, Hotchkis, Carlyle Johnstone, Keay, Kerr, Marshall, Meek, Middlemiss, G. D. MacRae, Neill, Parker, Richard, Shaw, Skeen, Urquhart, Wallace, Wilson and Marr, Divisional Secretary.

There were also present as guests : Stephen J. Henry, Esq., J.P., Chairman of the Glasgow District Lunacy Board ; George Ogilvie, Esq., Convener of the Gartloch Hospital Committee ; and James R. Motion, Esq., Clerk to the Glasgow District Lunacy Board.

Dr. Clouston occupied the chair.

The minutes of the last Meeting were read and approved of, and the Chairman was authorised to sign them.

Letters of apology were submitted from Drs. Yellowlees, G. M. Robertson, Alexander, Easterbrook, Maclachlan and T. C. Mackenzie.

A letter from Dr. Turnbull, thanking the members for their kind expression of sympathy with him in his illness, and regretting that he was still unable to attend the meetings, was read.

The Secretary was again instructed to communicate with Dr. Turnbull, and express the regret of the Division at his continued illness.

Appropriate reference was made by the CHAIRMAN to the death, since the last meeting, of Dr. James Rutherford, a distinguished alienist, and Physician Superintendent of the Crichton Institution for twenty-five years. Dr. Rutherford had been connected with the Association since its inception. It was unanimously resolved—"That it be recorded in the minutes that the members of the Scottish Division of the Medico-Psychological Association desire to express their deep regret at the loss of Dr. Rutherford, and their sympathy with the members of his family in their bereavement." The Secretary was instructed to transmit an excerpt of the minutes to Mrs. Rutherford.

The following were admitted to membership of the Association : C. Lawson Kerr, M.B., Ch.B.Glasg., Assistant Medical Officer, Argyll and Bute Asylum, Lochgilphead (proposed by Drs. C. J. Shaw, Hamilton C. Marr, and W. A. Parker) ; Donald Ross, M.B., Ch.B.Edin., Assistant Medical Officer, Roxburgh District Asylum, Melrose (proposed by Drs. J. Carlyle Johnstone, T. J. Clouston, and Hamilton C. Marr) ; Theodore Grant Gray, M.B., Ch.B.Aberd., Assistant Medical Officer, Kingseat Asylum, Aberdeen (proposed by Drs. H. de Maine Alexander, William Reid, and Arthur Kellas) ; James H. C. Orr, M.B., Ch.B. Edin., Assistant Medical Officer, Midlothian and Peebles District Asylum, Rosslynlee (proposed by Drs. R. B. Mitchell, Hamilton C. Marr, and Charles G. A. Chislett).

Drs. Hotchkis and R. B. Campbell were unanimously recommended as Representative Members of Council, and Dr. Hamilton C. Marr as Divisional Secretary.

The Asylum Officers' Superannuation Act and the circular issued by the General Board of Lunacy in connection therewith were discussed, and it was agreed that a meeting of representatives of the District Lunacy Boards and Medical Superintendents of the District Asylums in Scotland should be convened to arrange, if possible, for uniformity in the valuation of emoluments, etc., of the several asylums concerned.

Dr. PARKER gave a description of Gartloch Mental Hospital, pointing out its chief features. Special attention has long been paid to open-air treatment in the Institution. It was one of the first where this method of treatment was introduced. Dr. Parker thereafter conducted the members through the several wards, and the sanatorium for the treatment of the consumptive insane. The members were much impressed by all that they saw and the interesting explanations of Dr. Parker.

Dr. BAUGH, Senior Assistant Medical Officer, gave an account of the results of treatment of several cases of chronic epilepsy by purin-free diet.

Dr. MIDDLEMISS, Assistant Medical Officer, showed a case of hysteria in a lad (*vide* papers by Drs. Baugh and Middlemiss, pp. 470, 502).

The members were entertained to luncheon by the Glasgow Lunacy District Board.

Dr. and Mrs. Parker were thanked for their hospitality, the Glasgow District Board for their kindness, and Dr. Clouston for his conduct in the chair.

## IRISH DIVISION.

The SPRING MEETING of the Division was held at Hampstead, Glasnevin, and Highfield, Drumcondra, on Thursday, April 14th, 1910, by the kind invitation of the Drs. Eustace, who showed the members over Hampstead, and afterwards entertained them at luncheon.

The subsequent meeting was held at Highfield, Dr. H. M. Eustace being voted to the chair, and there were also present: Drs. W. N. Eustace, T. Drapes, H. R. C. Rutherford, J. Mills, James J. Fitzgerald, J. A. Oakshott, R. R. Leeper, and W. R. Dawson (Hon. Sec.). Apologies were received from Drs. W. Graham, C. E. Hetherington, F. C. Ellison, and F. E. Rainsford.

The minutes of the previous meeting were read, confirmed, and signed, and the Hon. Secretary reported on several matters arising out of them, including the position of the question regarding the payment of the Divisional Secretaries' expenses.

A resolution was thereupon proposed by Dr. DRAPES, seconded by Dr. OAKSHOTT, and carried unanimously, urging upon the Council the desirability of coming to a decision on the last-mentioned point without further delay.

Dr. W. R. Dawson was elected Divisional Secretary, and Drs. W. Graham and James J. Fitzgerald representative members of Council for the ensuing year. Dr. R. R. Leeper was nominated as examiner.

The following dates for the meetings of the Irish Division during the ensuing session were agreed on, *vis.*, Saturday, November 5th, 1910, and Thursday, April 27th, 1911. It was decided not to hold a summer meeting in 1911, as it was understood that the Annual General Meeting would take place in Ireland.

Two invitations (from Drs. W. Graham and Hetherington) having been received for the summer meeting on July 7th, 1910, it was unanimously decided to accept with thanks the former, which had the priority in time.

Dr. RUTHERFORD then read a communication, entitled "The Results of a few Leucocyte Counts in Mental Cases," in which he gave his findings in six maniacal and seven depressed cases. The observations were confirmatory of those of other workers, and seemed to indicate that there is a greater tendency to leucocytosis in mania than in melancholia. The paper was discussed by the CHAIRMAN and Drs. DAWSON, MILLS, DRAPES, and LEEPER, and Dr. RUTHERFORD replied.

The HON. SECRETARY read for Dr. ELLISON (who was absent) "Notes on Three Clinical Cases": that of a man who made a practice of kissing the gluteal region of all whom he could reach, having been told by voices that in this way he would cure his wife of piles; that of a man in whose rectum a large number of objects were found which he had swallowed; and a case where, after death, a briar pipe was found in the ileum. Drs. FITZGERALD, MILLS, OAKSHOTT, DAWSON, DRAPES, and the CHAIRMAN spoke.

Dr. DRAPES then took the chair, and Dr. H. M. EUSTACE read the following paper:

## A NOTE ON THE PROPHYLAXIS OF INSANITY.

In the first place allow me to express the pleasure we feel in your presence here to-day, and to thank you for your attendance at this Spring Meeting of the Irish Division of the Medico-Psychological Association.

I wish to bring under your notice some brief and imperfect remarks on the possibility of more work being accomplished as regards the prophylaxis of insanity.

Wright says, in the preface to some of his writings, that "the physician of the future will be an immunist." Knowing the progress that bacteriology and its applied science, *vis.*, vaccine-therapy, have made in recent years, he is probably correct, and this transformation may take place in our generation.

In the meantime it is well to encourage all branches of preventive medicine, and to attempt to blot out of existence some of the awful diseases which ravage mankind.

Simple measures often succeed where costly ones fail, *e.g.*, Haffkine's plague antitoxin has done little in India to prevent the spreading of plague, as compared with the highly efficient work performed by domestic cats, introduced into Indian villages, as the natives had noted that where there were no rats there was no plague.

We may be encouraged by our success in dealing with such dirt diseases as

typhus fever and puerperal fever, and the conquest of yellow fever, malaria, and Malta fever. In the veterinary field we note the triumph of the officials, who, by bold measures, have exterminated rabies in the United Kingdom. The obvious remark will be made that it is comparatively easy to stamp out disease in animals by ordering compulsory muzzling and compulsory slaughter of the diseased, but such procedures cannot be adopted with human mammals.

This is quite true, but cannot much be done by compulsory notification of such diseases as pulmonary tuberculosis and syphilis. The former is now a notifiable disease, and we are entitled to hope that its notification, by drawing the attention of the authorities to each case, and by nurses imbuing the poor consumptives with the absolute necessity for taking all the steps necessary to prevent the spread of the "white plague," will in time reduce the appalling death-rate from this disease in Ireland. (Even this year the Registrar-General's figures show an improvement.)

Syphilis is a world-wide disease, and especially poisonous to the nervous system. What physician can assert with an easy mind that a patient, who has been under his treatment for syphilis, is absolutely cured by a certain date? Locomotor ataxia and general paralysis of the insane frequently occur after all tertiary symptoms have cleared away. The problem of the marriage of a man who has at any time suffered from syphilis is frequent; and a great responsibility rests on the physician consulted. One of the most piteous sights in life is the congenital syphilitic infant. If syphilis was made a notifiable disease the patient would certainly feel his moral and physical leprosy more, and, shunning society, would be less likely to marry.

Why should not everyone contemplating matrimony be obliged to undergo a medical examination, and procure a certificate of physical and mental soundness, just as one does when contemplating a life insurance policy? Those who know and feel themselves to be sound would never object to such an examination, but the weakling and vicious might be deterred by the thought of having to submit themselves to the search-light of the medical officer of health.

Our rulers, in all their wisdom, at present make it compulsory for one of the contracting parties in a meditated matrimonial alliance to sleep so many nights in the parish in which the marriage is about to be solemnised, and he has to present a certificate to that effect to the officiating clergyman. Surely this law is worthy of the satire of W. S. Gilbert. Of what real advantage it would be to the health of the nation and the happiness of the bride and groom if they had to produce instead the suggested certificate of perfect health.

As regards "Eugenics," there was an interesting leading article on "Eugenics and Pauperism" in the *Medical Press and Circular* of November 17th, 1909. The editor lamented that no effective steps had been taken to prevent the propagation of lunatic and other diseased and degenerated persons. He referred to the fact that lunatics were often discharged from asylums as "cured," only to return after a few years' interval, during which they have propagated more insane stock. He concluded by recommending that "asylum patients should be kept under such restrictions that would render their procreation of children impossible."

[Note.—The writer, I presume, uses the term "asylum" patients to refer to all patients who have been at any time in an asylum, but in my opinion it is the unregistered insane who have not been treated in asylums who bring the largest number of mentally defective children into existence.]

In this connection we may note that the Royal Commission on the Care and Control of the Feeble-Minded state that feeble-mindedness "tends strongly to be inherited"; also in view of the evidence they received of the frequency with which feeble-minded women were admitted to the lying-in wards of the work-houses, to be delivered of illegitimate children, they are of the opinion that the prevention of mentally defective persons from becoming parents would tend largely to diminish the number of such persons in the population. They therefore advise that the mentally defective living at large and uncontrolled, both men and women, should be placed in institutions and kept under efficient supervision so long as may be necessary!

As regards "asylum" patients, we all realise the difficulty of detaining any patient in an asylum who is apparently "recovered," although we feel quite convinced that shortly after the hygienic and disciplinary life of the asylum is removed, many of such cases will most certainly relapse.

Dr. Robert R. Rentoul has had the courage to advocate the "proposed sterilisation of certain degenerates." Already two states in America have adopted his proposal, and it has been brought before the Government in Ontario (Canada).

As regards the abuse of alcohol in the causation of insanity, we all know what a high percentage of cases it is responsible for both directly and indirectly. As Dr. Clouston said in his Morningside report of 1901, "Liberty to drink himself to death or into an asylum was dear to the Briton, but it was an irrational application of the doctrine of liberty to say that every man had the inalienable right to render himself a burden on other people, and a source of degradation and danger to the community."

All children and adolescents should be taught to do without any form of alcohol; and a wise step has been taken in abolishing beer from schools. It is often said by the cynic, "You cannot make a nation sober by Act of Parliament." Very few Parliaments have tried to do so, but remember Norway and Sweden, who, finding themselves in a perilous and rotten condition, owing to the almost universal excess in the use of alcohol, and no restriction on its manufacture, adopted sternly repressive legislative methods about sixty years ago, and have now become comparatively sober nations.

Although the secretary to the United Kingdom Alliance is able to show that in the year 1909 there has been a decrease of £5,000,000 on alcoholic liquors as compared with 1908, the amount consumed in the British Isles is still far too high, and there is more need at the present moment in England for a "drink scare" than a "war scare."

National degeneration increased *pari passu* with the national drink bill up to 1909.

Ford Robertson (in Dr. Clouston's admirable book, *The Hygiene of Mind*) wisely states: "My study of the question forces me to the conclusion that the effects of alcoholic intemperance upon the people of this country are much more grave and far-reaching than has generally been suspected. Most people have seen with any degree of clearness only its most immediate effects. The influence it has upon the race has only been dimly suspected by a few, and they have been derided as ignorant and unscientific. The evidence of science is, I maintain, entirely on their side."

I am sure that many gynæcologists do harm by ordering various forms of alcohol in their treatment of dysmenorrhœa. As a recent writer on this subject neatly put it, "the periodic recurrence of the pain leads to a periodic desire for alcohol, which is taken in increasing doses."

The present Government deserve praise for endeavouring to tackle this grave matter of the Nation's alcoholic intemperance; and although it may not matter to us whether there are ten public-houses in a street or only one, we know that it often makes a difference of ten drinks or one to our weak-willed fellow citizen, who, maybe, is wrestling with his enemy under these adverse conditions.

It is interesting to note here that popular lectures on personal hygiene, temperance, and venereal diseases are now given by the fleet-surgeons in the Royal Navy to the crews; and it is encouraging to find that Dr. B. Leppington (signing himself a member of the International Society for the Prophylaxis of Venereal Disease), in a letter to the *Medical Press and Circular*, points out that the number per 1000 admitted to the Army hospitals suffering from venereal diseases has gradually dropped from 275 in 1885 to 72 in 1907, while the writer states that other statistics, official and unofficial, seem to indicate the same thing, *vis.*, a reduction of these diseases in our population, both civil and military. He points out the influence that doctors have, if they would only use it, and advises the profession "to work on, not as those without hope."

I now come to the medical inspection of school-children. Much valuable work was performed by the recent Royal Commission on the Feeble-minded, and it is to be hoped that their valuable suggestions will be adopted. That the general public are gradually awakening to the importance of this subject is shown by the Government appointing such a commission; and also by the fact that the Third International Congress on School Hygiene will be held in Paris during August this year.

When medical inspection of the board schools in England was determined upon, it was recognised that the duty of treating the defects disclosed must be



undertaken by the State, but the problem was not fairly faced, and as the *British Medical Journal*, in a leading article entitled "A National Emergency," points out, "the central and local authorities were anxious to avoid responsibilities—more especially as they involved expenditure. They turned to existing voluntary hospitals with a view of seeing how much could be got out of them and the medical profession for nothing."

This is altogether wrong, and if the scheme of district school clinics staffed by the local practitioners is carried, they should be highly paid by the State. From a national health point of view, it is much more important to take care of the coming generation than to medically inspect the flotsam of society in our asylums.

Now that the old-fashioned family physician has almost disappeared, I think a great responsibility rests upon the school physicians appointed to the public schools. He has great opportunities of detecting the early symptoms of disease of body and mind, if he is paid sufficiently well to inspect the boys frequently.

This has not been so in the past. Indeed, at my public school you only saw the doctor if you happened to break your neck or developed diphtheria!

"*Obsta Principis*," as Dr. Clouston truly says, is the most valuable motto in all effectual mental hygiene; and who is in a better position than the school doctor to detect the stigmata of degeneration, the necessity for rest, the appearance of vice, in the various pupils? He should be their mentor as well as their physician, and should give friendly addresses on the problems of sex to the senior classes, who are much troubled by a natural appetite. Such a friend would be a great help to many school boys, and he would without doubt assist to avert the sad breakdown of many adolescents after leaving school.

This, gentleman, brings to a conclusion a discursive paper. If it succeeds in stimulating a discussion it will achieve its object.

#### DISCUSSION.

Dr. DRAPES said that the paper was highly suggestive. The nineteenth century had been eminent in preventive medicine and hygiene, but mental hygiene had been omitted—Hamlet without the Prince. Medical examination before marriage was good in theory, but stopping marriage would not stop procreation. The public must be educated, and the teaching of the structure and function of the body should commence from infancy. Sterilisation would be even more necessary in improvable cases, those which were discharged quasi-recovered, and these should be given the choice of sterilisation or perpetual detention. He also alluded to the necessity for better teaching of medical men in psychology and psychiatry.

Dr. FITZGERALD expressed his agreement with Dr. Eustace. He knew of a case where a high dignitary of the Roman Catholic Church had used his influence against the marriage of a girl to a man of bad heredity. There were few weak-minded girls who had not been parents, but he did not think sterilisation a feasible measure.

Dr. LEEPER attributed the increase of insanity to the fact that every workhouse was a lunacy manufactory run by State aid. Weak-minded girls ran there to be confined of illegitimate children. As regarded syphilis, where notification had been enforced the disease increased, owing to concealment. Educational methods were the only ones likely to be successful. He quoted cases of a girl who had been four times insane at four deliveries, and another in which the same thing had occurred in five or six consecutive confinements.

The SECRETARY agreed on the whole with Dr. Eustace as to the causative importance of alcohol, though as sole or chief cause he thought it had been over-rated, and did not account for more than 10 *per cent.* of cases or less. As regarded detention, it should be borne in mind that, though an onerous measure at first, if it were strictly enforced the numbers requiring to be so treated would progressively diminish, it might be hoped almost to vanishing point. He concurred, however, in the view that education of the people was the most important remedial measure.

Dr. OAKSHOTT thought that the churches of all denominations could do much to educate the people.

Dr. FITZGERALD mentioned that the young clergy at Maynooth were now lectured on physiology and hygiene.

Dr. EUSTACE made a few remarks in reply.

The meeting terminated with a cordial vote of thanks to the Drs. Eustace for their kind hospitality, and for the pleasant day which had been spent.

#### SPECIAL MEETING.

A special Meeting of the Division was held, with the sanction of the President of the Association, on Thursday, May 18th, 1910, at the Royal College of Physicians, Dublin. Dr. M. J. Nolan was voted to the chair, and there were also present: Drs. W. Graham, R. R. Leeper, W. Smyth, J. Mills, J. O'C. Donelan, J. M. Redington, T. A. Greene, F. O'Mara, and W. R. Dawson (Hon. Sec.). Apologies were received from Drs. C. E. Hetherington, E. O'Neill, J. A. Oakshott, B. C. Harvey, T. Drapes, and H. M. Eustace.

The HON. SECRETARY explained that it was a matter of common rumour that amongst the applicants for the post about to be vacated by Sir George O'Farrell were men who had had no special training in lunacy, and there was also the possibility that a man might be transferred from some other Government Department. Under these circumstances the meeting had been summoned in haste, as the Quarterly General Meeting of the Association would take place on May 24th, and the Division might wish to ask them to make representations on the subject.

The discussion was opened by the CHAIRMAN, who expressed warm appreciation of Sir George O'Farrell's work, in which all concurred. A general debate followed, in which most of the members joined, and it was finally proposed by Dr. GRAHAM, seconded by Dr. DONELAN, and passed unanimously:

"That the Irish Division of the Medico-Psychological Association would strongly urge the Association at large to represent to the Irish Government the extreme importance, in filling the posts about to be vacated by the Inspectors of Lunatics, of selecting candidates who are thoroughly conversant, by training and experience, with the administration of lunatic asylums and the practical treatment of the insane."

A resolution in somewhat similar terms was proposed by Dr. O'MARA, seconded by Dr. LEEPER, and directed to be sent to all the Irish Members of Parliament.

In view of the fact that this was the first meeting of the Division since the lamented death of His Majesty King Edward VII, a resolution expressing sorrow and sympathy with the Royal Family was proposed by Dr. GRAHAM, seconded by Dr. LEEPER, and passed unanimously in silence.

The meeting terminated.

#### NOTE.

The mention of Dr. John Gideon Van Millingen in Dr. Bailey's interesting article upon Hanwell Asylum deserves a note on the family. Dr. Bailey characterises Dr. Millingen's period of service in Hanwell as brief and stormy, and Millingen himself did not hesitate to make that known to the public. His father was a Dutch merchant who eventually settled in Westminster. One of his brothers died at the age of fourteen, and was buried in the Abbey Cloisters, the epitaph having been written by William Cowper. In 1790 the family migrated to Paris, and passed through the horrors of the Revolution, after which the brother James went to Italy, and wrote valuable works on antiquities before his death in 1845 in Florence. John repeatedly met the Jacobin leaders in Paris in his boyhood, and after adventurous service in the army he retired with the Waterloo and other medals. He was connected with the Military Asylum at Chatham when appointed to Hanwell, and after his service there he is said to have opened a private asylum in Kensington. He died in London in 1862. He produced various dramatic writings, one of which, "The Illustrious Stranger," is yet sometimes played by amateurs, and also a novel, and various compilations more or less medical in character. His *Aphorisms on Insanity*, and another work on *Mind and Matter*, are not uncommonly found on the lists of secondhand booksellers. Julius Michael Millingen, John's nephew, was also a physician, and is chiefly remembered owing to his connection with Lord Byron, knowledge of whose last hours is principally gained from Millingen's memoirs. He was Court Physician to five successive Sultans of Turkey, and persuaded David Urquhart to establish a Turkish bath in London. He died in 1878 in Constantinople. His son still resides in Dunblane, after a business life spent chiefly in Turkey.—U.

LVI.

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## OBITUARY.

ROBERT SMITH, M.D., L.R.C.S.E.

Dr. Smith died on May 28th, in his seventy-eighth year, somewhat unexpectedly, at the residence of his son-in-law, Dr. Robert Stuart, Hallgarth House, Durham. It was indeed fitting that he should have passed in the county in whose service he had spent so many years. He was a remarkable man, unfortunately known by too few of our Associates, and therefore not fully appreciated by those who were not brought into actual contact with his notable personality. We who mourn his loss, even at his advanced age, and knowing that he had done a noble and long day's work, recall memories of his life for which we are grateful, and endeavour to set forth some record of a worthy nature in the pages of the Journal.

Dr. Smith was the fifth and youngest son of the late Rev. Robert Smith, D.D., senior minister of St. Machar's Cathedral, old Aberdeen, and of his wife, Mary, daughter of Colonel Molison, Brechin. His education was gained in the classic surroundings into which he was born—at the Grammar School and King's College, where he took his degree of M.D. in 1858. Previously, in 1854, he had become M.B. and L.R.C.S.E., and for a time acted as assistant to Dr. Fyfe, Professor of Chemistry. He was fortunate in having been selected to act as assistant medical officer by Dr. W. A. F. Browne, of the Dumfries Royal Asylum, who remained his life-long friend.

After travelling in Canada he was appointed to the post he so long held as Medical Superintendent of the Durham County Asylum, although that institution was not then ready for occupation. The patients were boarded at a private asylum at Bensham, Gateshead, and afterwards at the Bath Lane Asylum, Newcastle. In April, 1858, however, the Durham County Asylum was opened, with accommodation for 400 patients, at Sedgfield, and it gradually increased in size until it held 1600 in 1899, when Dr. Smith felt that the time had come for him to retire.

Under his fostering care, watchful over every detail of development, it became an important institution, throughout which the welfare, the comfort, and the happiness of his patients were Dr. Smith's constant concern. Nothing was left to chance, everything was brought under his personal notice by his active staff, and his rapid decisions kept the routine of life on the right lines. His profound knowledge and his skilful use of it made him a chief who commanded respect, while his kindly, generous nature endeared him to all.

Like his intimate friend, the late Dr. Howden, of the Montrose Royal Asylum, Dr. Smith had a deep sense of the importance of interesting the insane in occupations and amusements; he led them into the way of regarding life from the bright and cheerful side. It is rather the fashion to deride these practical philanthropic duties of asylum management, to regard with condescension the man who labours for the happiness and comfort of his patients, to speak apologetically for all that has gone to make the reputation of English asylums as homes of healing directed with beneficent zeal. We are apt to incline to ultra-scientific absorption, and decline to occupy ourselves with the incessant cares of administration in detail, but we must always remember that our Association was established and is maintained, not only for the cultivation of science in relation to mental disorder, but also for the promotion of improvements in administration. When we think of the turbulent, difficult patients who so often require treatment in the Durham County Asylum, and his repeated statement that he never found seclusion necessary, and his adroit management of men and women, we find it hard to mention anyone who did more for the humane and enlightened treatment of those committed to his care. And, apart from his profound medical knowledge and wide experience, Dr. Smith was gifted in no small degree with that scientific competence which rendered him capable in mathematics, astronomy, chemistry, and histology. These were his interests and avocations in the time which he could spare from the duties of his professional life, which were rigidly fulfilled. Dr. Smith's first concern was always the organisation of relief for the alleviation of his patients, and his range of action was wide. Apart from the ordinary labours of the day, he organised and fostered healthful outdoor sports and indoor recreations. His musical capacity was productive of concerts and entertainments of notable excellence, and the chapel services were memorable in the use of music and singing. Dr. Smith was fortunate

in securing a fine organ and capable choir, and in interesting his people in the chapel and all it stood for.

Dr. Smith's patients loved him, and one of his friends truly said, "he was sturdy in wisdom, high-minded and unselfish, and very able; one can give no higher praise, and this he deserved." He was one of the very best of men, and only those who were closely associated with him officially or as assistants are able to fully appreciate his worth; amongst the latter (and the list is a long one) may be mentioned the late Drs. Aitken (Inverness), J. A. Campbell (Carlisle), John A. Wallis (Commissioner in Lunacy), Colin McIvor Campbell (Perth), Drs. John Merson (Hull), Robert L. Rutherford (Exeter), Edmund Rowe (Ipswich), J. T. Callcott (Newcastle-on-Tyne), and John W. Geddes (Middlesbrough). Sir Patrick Manson and Colonel Kenneth McLeod, I.M.S., were also assistants with Dr. Smith for several years in their early career.

A link which bound Dr. Smith to Aberdeen, where his sisters still live, was his marriage with a daughter of the late Rev. Principal Campbell, of the University. His wife's recent death told heavily upon Dr. Smith's health. Of a family of five sons and four daughters, all survive with the exception of the eldest son, who was in the medical profession, and died several years ago. Other three sons also entered the medical profession. One is a doctor at Tunbridge Wells, a second in Norwich, and a third in the Indian Medical Service. The fourth surviving son is a lawyer in New Zealand. Of the four daughters three are married, and it was with one of them that Dr. Smith went to reside recently, before his fatal illness.

#### HENRY JOHN MANNING, B.A.Lond., M.R.C.S.

By the death of Dr. Manning, the well-known Superintendent and Licensee of Laverstoke House, the Association loses one of its elder members, who has long held the friendship and esteem of a wide circle.

Born in 1835, and educated at University College School, he graduated in arts at the London University, and subsequently studied medicine at University College, taking his M.R.C.S. in 1860.

After several voyages to Australia in a medical capacity, he joined Dr. Bushman at Laverstoke House in 1862, and became medical superintendent on the death of Dr. Stanley Haynes in 1870.

Dr. Manning was a contributor to this and other medical journals, but especially devoted himself to the work of the British Medical Association, becoming Honorary Secretary and Treasurer of the Southern Branch. He also took an active part in the management of the Salisbury Infirmary.

Dr. Manning preserved his literary activities throughout his life, and was distinguished by the thoroughness of his execution of duties, both professional and public. He obtained and held the confidence of his patients as well as of his numerous *confrères*, to whom he extended a genial and liberal hospitality.

Dr. Manning married the elder daughter of the late proprietor of Laverstoke House, Mr. Joseph Haynes, J.P., who, with two daughters, survive to mourn his loss.

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#### INTERNATIONAL CONGRESS FOR THE CARE OF THE INSANE.

THE Fourth International Congress, which will meet from October 3rd to the 7th, 1910, in Berlin, at the "Abgeordnetenhaus" (Prussian House of Parliament), will, like the previous congresses, not only deal with questions regarding the treatment and accommodation of patients suffering from mental derangement, but will also promote investigations and arrangements conducive to the protection of the general mental health in every respect.

The Congress hopes to secure the interest not only of physicians, but also of municipal officials, lawyers, and schoolmasters. It will investigate the injuries caused to the mind by social and hygienic abuses, will endeavour to explain the origin of mental diseases from infancy, and point out the best possible methods for the prevention of mental derangements. It proposes to promote the means of com-



bating abnormal psychical conditions, *viz.*, medical treatment in and outside the asylums, regular home nursing, help and advice to relations, regulation of the legal conditions of patients, assistance, providing work for and care of the patient after his treatment in an asylum. It proposes, furthermore, on the basis of scientific experience, to improve the education and protection of juveniles with abnormal mental traits and of those who are backward in development.

An exhibition illustrative of the care and treatment of patients suffering from psychical or nervous derangements will be held in connection with the congress, and will afford a view as complete as possible of the progress made in this branch of medical science during the last thirty years.

In this exhibition, which will also take place in the rooms of the "Abgeordnetenhause," explanatory lectures (with slides) will be given.

The subjects already provided for these lectures are: "Modern Asylums," "Care and Treatment of Infants and Juveniles in the Asylums," "Means to Preserve Mental Health," and "Can an Increase of Mental Diseases be Proved?"

In addition arrangements have been made for the inspection of some recently built hospitals and asylums in the neighbourhood.

Papers should be announced by June 15th, 1910, to Professor Dr. Boedeker, Schlachtensee-Berlin, who will give all necessary information.

The president will arrange the programme.

The official languages are: English, French, German, Italian.

The meetings will be presided over by the honorary presidents, to be elected at the inaugural meeting.

Each paper of a general report is limited to thirty minutes, the reading of papers on any other subject to fifteen minutes; five minutes will be allowed to each member taking part in the discussion. The president will be entitled, with the consent of the meeting, to make exceptions in special cases. At the termination of the discussions the readers of reports will be allowed a short reply.

The readers of reports and the members partaking in the discussion must hand in a short extract of the same, written on one side only, to the secretary within twenty-four hours.

Reporters are requested to send a short summary to Professor Dr. Boedeker, Schlachtensee-Berlin, by September 1st, 1910, so that the reports may be presented for discussion.

Each paper (manuscripts in type-writing, please) that arrives in time will be published in the official general report of the Congress. Drawings, curves, etc., are printed at the expense of the author only. Each author may claim fifty copies of his paper.

Requests concerning the International Congress for Care of the Insane are to be treated at the closing meeting. Written requests are to be delivered two days before to the president.

The office of the Congress will be open from September 30th to October 7th, from 9-12 a.m. and 2-4 p.m. (House of Parliament, 5 Prinz Albrechtstrasse, Berlin). A post and telegraph office is established in the same building.

Requests for membership of the Congress are to be addressed as early as possible to Mr. Mietzner, 5 Prinz Albrechtstrasse, Berlin S.W. The members' tickets can be obtained from July 1st upon receipt of the amount of member's fee, £1 (20 marks). The fee for a lady's ticket is 10s. (10 marks).

The member's ticket entitles to admittance to the meetings, to entertainments and to the exhibition, to receiving the daily paper and the Report of the Congress (for members only).

The badge of membership, etc., are issued at the office.

#### THE LIBRARY OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Library is open daily for reading, and for the purpose of borrowing books. Books may also be borrowed by post, provided that at the time of application threepence in stamps is forwarded to defray the cost of postage. Arrangements have been made with Messrs. Lewis to enable the Association to obtain books from the lending library belonging to that firm, should any desired book not be in the Association's Library.

The following books have recently been added to the Library :

*A System of Syphilis*: Vol. IV, *Syphilis of the Nervous System*, by F. W. Mott, F.R.S.

*Report of the Royal Commission on the Care and Control of the Feeble-minded* (8 vols).

*The Lunacy Law of Scotland.*

*The Lunacy Law of Ireland.*

Applications for books should be addressed to The Resident Librarian, Medico-Psychological Association, 11, Chandos Street, W. Other communications should be addressed to the undersigned at Long Grove Asylum, Epsom.

H. DEVINE, } *Hon. Secretaries,*  
B. HART, } *Library Committee.*

### NOTICES OF MEETINGS.

#### MEDICO-PSYCHOLOGICAL ASSOCIATION.

The sixty-ninth Annual Meeting of the Association will be held on Thursday and Friday, July 21st and 22nd, 1910, in Edinburgh, under the Presidency of Dr. John Macpherson.

On Wednesday, July 20th, there will be meetings of Committees at the Royal College of Physicians, as follows: Parliamentary Committee, 2.30 p.m.; Educational Committee, 3.30 p.m.

*Reception.*—In the evening Dr. and Mrs. Macpherson will hold a reception at the Royal College of Physicians from 9.30 to 11.30 o'clock.

The Council will meet on Thursday, July 21st, at 9.30 a.m.

The Annual Meeting will commence at 11 a.m. on Thursday, 21st July, at the Royal College of Physicians, when the usual business of the Association will be transacted.

Notice of motion by Dr. BOND: That the subjoined rules as to the appointment of examiners for the Nursing Certificate shall take the place of those provided by the last sentence of present Bye-law 71:

"The Council shall similarly appoint examiners for the Nursing Certificate, whose number shall correspond with the number of divisions. They shall each be eligible for re-election for three years, but having acted for the whole of that period they shall not be eligible for re-election (except as interim examiners) until the expiry of three years. Provided that any examiner holding office for less than three years shall be eligible for re-election after the expiry of one year.

"Each Division may suggest the names of two members (one at least of whom shall be a medical superintendent) for the consideration of the Educational Committee, who, in recommending to the Council, shall, as far as practicable, arrange that each Division supplies an examiner.

"In making the appointments annually, the Council shall so arrange that at least two of those appointed shall have acted as examiners for a year. In case of a casual vacancy occurring between the meetings of Council, the President, with the concurrence of the Chairman and Secretary of the Educational Committee, shall appoint an interim examiner to hold office till the next meeting of Council."

Notice of motion by Dr. BOWER: That the member holding the office of Secretary to the Parliamentary Committee be an Official Member of the Council, and that Bye-law 31 be varied accordingly.

Notice of motion by Dr. HAYES NEWINGTON: That new members elected in the last half of any year shall have the option of joining the Association as soon as their election is complete, or of deferring joining to January 1st of the succeeding year, and that Bye-law 19 be varied accordingly.

2 p.m.—The President's Address, after which the following papers will be read: Dr. FORD ROBERTSON on "Infective Foci in General Paralysis and Tabes Dorsalis." Dr. JOHN CARSWELL on "The Treatment of Insipient Insanity in

Observation Wards." Dr. J. P. STURROCK on "Certain Forms of Insanity in the Criminal Class." Dr. R. M. MARSHALL on "Periodic Attacks of Mental Excitement and Depression in the Chronic Insane."

Friday, July 22nd, at 10 a.m.—The following papers will be read: Dr. A. R. URQUHART on "Lunacy Administration in Scotland." Dr. LEWIS C. BRUCE on "The Deviation of Complement in Connection with the Diseases known as Mania." To be followed by three papers by Drs. HAMILTON MARR, IVY MCKENZIE, and BROWNING, on "The Arsenical Treatment of Protozoal Diseases." Dr. C. T. EWART on "Eugenics and Degeneracy."

12.45 p.m.—Adjournment for luncheon.

By the kindness of Dr. G. M. Robertson and the Board of Managers of the Edinburgh Royal Asylum, an invitation to luncheon at Craig House, Morningside, is extended to members, to be followed by a Garden Party, to which ladies are invited, at 5 p.m., in the grounds of Craig House, when an opportunity will be afforded of inspecting the Asylum.

2 p.m.—Afternoon Session, in large Hall at Craig House. Dr. GEORGE M. ROBERTSON will open a discussion on "The Treatment of States of Mental Excitement in the Insane." To be followed by the following papers: Dr. LEONARD D. H. BAUGH on "A Clinical Study of Anæsthesia, Mental Confusion, and Moods in Epilepsy, Confusional Insanity, and Hysteria." Dr. R. DODS BROWN on "The Viscosity of the Blood in Mental Diseases." Dr. G. RAE GIBSON "On the Treatment of Dementia Præcox by increasing the Blood-Tension." Dr. ALICE BABINGTON, "A Note on the Opsonic Index in Insane Persons." Dr. G. SCOTT WILLIAMSON, "A further Contribution to the Study of the Cerebro-spinal Fluid." Dr. WINIFRED MUIRHEAD on "The Wassermann Reaction in the Blood and Cerebro-spinal Fluid, and the Examination of the Cerebro-spinal Fluid in General Paralysis and other Forms of Insanity." Dr. H. MORTON on "The Chemistry of the Cerebro-spinal Fluid"; Dr. GILMOUR on "The Wassermann Reaction, a more reliable Technique"; Dr. C. G. A. CHISLETT on "Syphilis and Congenital Mental Deficiency," from the Scottish Western Asylums Research Institute.

N.B.—Owing to the number of paper, it has been decided to limit the time for reading a paper or opening a discussion to fifteen minutes, and the time for subsequent discussion to five minutes for each speaker.

5 p.m.—Garden party at Craig House.

Saturday, July 23rd.—Excursion to Bangour Village Asylum. (By the 10.35 a.m. train from the Waverley, and four minutes later from the Haymarket Station.)

By the kind invitation of Dr. Keay and the Edinburgh Board of Lunacy, a visit to Bangour Village has been arranged for the members and their friends, ladies being included in this invitation. The party will arrive at Bangour Station at 11.23 a.m. Prior to inspecting the Asylum, Dr. Keay will read an account of the Segregate System as exemplified by Bangour Village. After luncheon at 1 p.m., a further inspection of the Village will be afforded, followed by tea at Dr. Keay's house.

Return train from Bangour Station at 4.5, arriving at Edinburgh at 4.52.

Members accepting this invitation are asked to early notify their intention on the accompanying form.

The Annual Dinner will take place on Thursday, July 21st, at the Caledonian Hotel, at 6.45 p.m. for 7 o'clock.

It will very considerably facilitate the making of necessary arrangements, especially in regard to seating, if members will kindly signify at an early date to the General Secretary their intention of dining. If any member desires to bring a guest, or to sit near other members, this will be arranged on his signifying his wish to the Honorary Secretary before the meeting.

It may be clearly understood that no liability is incurred by announcing an intention to dine if later on a member finds that he cannot attend; and further, if a member finds that he can dine, his not having given notice of his intention does not preclude his doing so. But in either case a letter or telegram addressed to the Treasurer, at the Caledonian Hotel, Edinburgh, will be serviceable and kind.

The charge for dinner tickets (wines included) will be One Guinea, and pay-

ment should be made, either by cheque or in cash, to the Treasurer, who will supply a voucher.

Honorary Membership of the University and Conservative Clubs, opposite the Castle in Princes Street.—The Committee of the University Club have kindly agreed to admit fifty members of the Association to the privileges of the Club from the 20th to the 23rd July inclusive. The same privileges have been granted for the Scottish Conservative Club to those members to apply to the Secretary for tickets.

*South-Eastern Division.*—The Autumn Meeting will be held, by the courtesy of Dr. Stansfield, at the London Connty Asylum, Bexley, on Wednesday, October 5th, 1910.

*South-Western Division.*—The Autumn Meeting will be held on Friday, October 28th, 1910.

*Northern and Midland Division.*—The Autumn Meeting will be held, by the courtesy of Dr. Hopkins, at the York City Asylum, Fulford, on Thursday, October 20th, 1910.

*Scottish Division.*—The Autumn Meeting will be held on Friday, November 18th, 1910.

*Irish Division.*—The Autumn Meeting will be held on Saturday, November 5th, 1910.

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#### APPOINTMENTS.

Grills, S. H., M.D., R.U.I., Medical Superintendent of the Chester County Asylum.

Hart, Bernard, M.B.Lond., M.R.C.S., L.R.C.P., Lecturer on Mental Diseases and Mental Physiology at University College Hospital Medical School.

Planck, Charles, M.A.Cantab., M.R.C.S., L.R.C.P.Lond., Medical Superintendent of the Brighton County Borough Asylum, Hayward's Heath.







To His Most Excellent Majesty  
KING GEORGE V.

May it please Your Majesty

WE, the PRESIDENT, COUNCIL and the MEMBERS of the  
MEDICO-PSYCHOLOGICAL ASSOCIATION  
of Great Britain and Ireland

whose lives are specially devoted to the welfare and care of the Insane throughout all  
parts of Your Majesty's Dominions most respectfully tender to Your Majesty our heart-  
felt sympathy and Condolence in the grievous bereavement sustained by Your Majesty,  
Your Royal Consort and the much beloved Queen-Mother by the loss of

His Most Gracious Majesty King Edward

Stricken by an overwhelming sorrow this Empire mourns an all but irreparable loss; our  
Profession an illustrious Patron; and the Civilized World a Royal Emblem of Universal Peace, ever  
keenly anxious for the moral and hygienic welfare of His People, their intellectual enlightenment and  
happiness, the encouragement of all noble aspiration and glory. His reign has maintained in unbroken  
sequence the glory of His illustrious predecessor Queen Victoria.

No Monarch's heart ever beat more in unison with the heart-throbs of suffering Humanity; no  
Monarch ever responded more eagerly to the claims of the humblest of His subjects; and His tender  
solicitude wherever pain, disease or sorrow cast their shadows has for ever enshrined Him in  
the memory of the affections of His People.

We, Your Majesty's devoted subjects, earnestly pray that you may long be spared to command  
the affections and loyalty of Your subjects, and to reign over the destinies of the United Peoples  
of a World-wide Empire.



June 1910.

W. Nevill-Lewis President.

H. Traup-Hurns Treasurer.

W. J. Allen Registrar.

C. Hubert B. D. L. General Secretary.

# THE JOURNAL OF MENTAL SCIENCE

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## Part I.—Original Articles.

*The Presidential Address on Conceptions of Insanity and Their Practical Results, delivered at the Sixty-ninth Annual Meeting of the Medico-Psychological Association, held in Edinburgh on July 21st and 22nd, 1910.* By JOHN MACPHERSON, M.D., F.R.C.P.E.,  
Commissioner in Lunacy for Scotland.

YOU have called me suddenly and unexpectedly to a high honour, and I have willingly responded to your call. Had I done otherwise it would have been inexcusable, for the very fact of my ordinarily enforced aloofness from your deliberations left me, perhaps, freer than many others to step into the breach caused by the very regrettable indisposition of your President-elect, Dr. Turnbull. Another reason prompted me to accept your gracious invitation. Only two of your former Presidents, Dr. W. A. F. Browne in 1866, and Sir James Coxe in 1872, held similar official positions to mine. It seems not inappropriate, therefore, after the long flight of thirty-eight years, during which momentous changes affecting our attitude towards mental diseases have swept over this Association and over the various Lunacy Commissions, that the identity of our interests, our aims, and our aspirations should again be marked by the election of a member of one of the Central Boards to this Chair.

When I looked over the long list of the presidential addresses of my predecessors I confess I was alarmed by their erudition. Some of these, more especially in recent years, can



only be described as scientific monographs. It was plainly out of the question for me, in the time at my disposal, and with my rusty weapons, to attempt to instruct you after their example, while of dry-as-dust statistics we have all of us had recently more than enough in the ponderous reports of two Royal Commissions. I have, therefore, taken as my subject a review, scientific and critical, of the various conceptions of insanity and their practical results.

The conceptions which have influenced the study and progress of psychiatry are all of them theories of causation, or, at any rate, they may, in a remarkable manner, be identified with the broad causal concepts which, from the earliest times until now, have dominated the thoughts of mankind.

Comte affirmed that human knowledge passed through three stages—the theological, the metaphysical, and the positive or scientific.

Whether we prefer a philosophical or a sociological classification of civilisation, we must believe that the change from one stage to the next is not accidental, but evolutionary—the one phase preparing the way for the succeeding one. Corresponding to these evolutionary phases are the three great causal concepts which underlie them or arise from them, as we choose to think. They are as follows :

(1) The volitional concept, which accounts for consequences as the result of will, either animating an object or operating upon it from without.

(2) The empirical concept, which presents only an unconditional succession of events, and which tends to regard a preceding event as the cause of the immediately succeeding one.

(3) The scientific, or, as it is technically called, the ideal concept, which goes a step farther and sees in the phenomenon which we call consequence the continuation of that phenomenon which we call the cause (1). The latter alone is a satisfactory concept of causation. Yet, as we shall see, it is but beginning to operate, and we are far from having done with the others.

### *I. Period of the Volitional Concept.*

Our present civilisation dates from the introduction of Christianity into Europe. The absolute subjection of the social

organism to the rule and discipline of the mediæval church was a necessary preliminary to the evolution of those altruistic sentiments upon which depend the systems of the modern care of the poor, the sick and the insane. It is a habit of most medical historians to refer longingly to the Golden Age of Greek medicine, and to deplore the breach which took place in the progress of the medical sciences by the submergence of Europe under the dogmatic theology of the middle ages. They assure us that, but for the downfall of the Roman Empire and the rise of the new religion, the sciences, especially medicine, would now have attained a much more advanced position ; that, in fact, we have lost a thousand years of progress, and that we began only at the period of the Renaissance a slow and laborious awakening. The Greeks possessed, probably, the highest intellectual development ever attained on earth. According to Sir Francis Galton (2) the average ability of the Athenian race was, on the lowest possible estimate, very nearly two grades higher than our own—that is, about as much as our race is above that of the African negro. It is easy to conceive that a people so intellectually endowed, which had produced Socrates and Plato, could also produce Hippocrates, whose clear views of disease, including insanity, have made this first observer a model to all succeeding times. But the Greek Republics were minute intellectual islands in a vast ocean of pagan ignorance. Moreover the Greeks lacked the essential implement of the propagandist—altruism—and they were inevitably submerged in the sea of surrounding darkness out of which they had so gloriously risen. Professor Mahaffy (3) says: “The most enlightened Greeks stood nearer, I fear, to the savages of the present day, who regard without respect or affection every human being who has become useless in the race of life, or who even impedes the course of human affairs . . . it was only among a few conservative cities like Sparta, and a few exceptionally refined men like Plato, that the nobler and kindlier sentiments prevailed.” George Henry Lewes (4) says: “But the ethics of the Greeks were at the best narrow and egotistical. Morality, however exalted or comprehensive, only seemed to embrace the individual ; it was extremely incomplete as regards the family, and had scarcely any suspicion of what we call humanity. . . . By the introduction of Christianity ethics became social as well as individual.”

The rise of Christianity and the concomitant decadence of Greek and Roman culture was marked by the appearance of a new element, namely, an altruistic ideal of the very highest conception. It was "a proclamation of the universal brotherhood of men." "The affection which the members bore to each other, the devotion of all to the corporate welfare, the spirit of infinite tolerance for every weakness and inequality, the consequent tendency to the dissolution of social and class barriers of every kind, beginning with those between slave and master, and the presence everywhere of the feeling of actual brotherhood, were the outward features of all the early Christian societies." (5) It was undoubtedly because of the dissolving influence of these altruistic ideals upon existing society, and not because of their theological tenets, that the early Christians suffered martyrdom, for the Romans were proverbially tolerant of the abstract religious opinion of others, owing largely to the agnosticism and indifference of the educated ruling classes. Slowly and gradually Europe came under the absolute domination of the Church, until in the twelfth century the individual reason was wholly subordinated, independent judgment was extinguished, and almost every form of intellectual activity was crushed by the tremendous supernatural idea which engrossed the thoughts of men and possessed their minds. Moreover, the organic continuity of the intellectual attainments of the older civilisations had been completely broken and lost. That is the indictment which has aroused the wrath of successive modern authors, such as Gibbon, Lecky, and Maudsley. Says Mr. Lecky (6): "A hideous, sordid, and emaciated maniac, without knowledge, without patriotism, without natural affection, passing his life in a long routine of useless and atrocious self-torture, and quailing before the ghastly phantoms of his delirious brain, had become the ideal of nations which had known the writings of Plato and Cicero, and the lives of Socrates and Cato." Again, Dr. Maudsley (7): "If, like St. Macarius, he slept for months together in a marsh, exposing his naked body to the stings of venomous flies, or, like St. Simeon Stylites, he spent the greater part of his life on a pillar sixty feet high, or, like St. Anthony, the patriarch of Monachism, he had never, in extreme old age, been guilty of washing his feet, he was thought to have reached the ideal of human excellence and was

canonised as a saint." The fault of these, and many similar vituperative criticisms, lies not only in their captiousness, but conspicuously in the fact that they are strangely oblivious to a cosmic event of such ethical importance. Imagining that social progress depends wholly upon intellect and upon the spread of mere knowledge, these critics have failed to realise the significance of the great element of altruism which underlies modern civilisation, and which undoubtedly owes its prevalence to the introduction and growth of Christianity in Europe. We may conclude from all this that it was by means of the extraordinary strength of its super-rational sanction that the ethical system associated with the Christian religion, in which the thought of Europe was steeped for ten centuries, has resulted in raising the people coming under its influence to the highest state of social efficiency ever yet attained.

It is believed by not a few that the day of super-rational sanctions is over, and it is not unnaturally asked by such people why the edifice of altruism does not fall when its prop is removed. The answer is surely very clear. In an evolutionary process there can be no discontinuity. The external appearances—the forms—change, but the process itself is unalterable, for religion, which is one of the most concentrated forms of psychic life, will probably always continue to reveal itself in new forms. If, then, the social process, whose foundations were laid in Christian altruism, is an evolutionary process, as who can doubt, the main characteristic must continue to the end, and there is abundant evidence that it is not only continuous but progressive. When we consider our own speciality we find that altruism has prompted almost all the great advances in the care of the insane, and that sympathy has been the characteristic feature in the mental endowment of its more famous leaders. Speaking of Conolly, Dr. W. A. F. Browne (8), then Commissioner in Lunacy for Scotland, said in his Presidential Address to this Association forty-four years ago: "His ideas seemed to have passed through his heart, and his feelings to have raised and rarefied his intellect . . . The insane he positively loved."

No one can read Lord Shaftesbury's life without appreciating the motive power which led to his great endeavour on behalf of the insane; and no one can fail to believe that without his indomitable—I might, without offence, say obsessive—deter-



mination to obtain his end, the course of lunacy administration in the three kingdoms would have been totally different to-day from what it is. Before Shaftesbury there were others, such as Tuke, Conolly, Charlesworth, and Gardener Hill. In Scotland we had movements which resulted in the erection of the royal asylums towards the close of the eighteenth century.

But these and many other examples of pious benevolence were sporadic, and sank into insignificance before the great socialistic legislation of 1845, by which, for the first time in any civilised country, the English State assumed the real—not, as previously, the pretended—supervision of the insane. The primary object of State intervention was not alone to prevent abuses of the insane, which were real enough, but partly no doubt also to protect the liberty of the sane, which was alleged to have been in danger. But, having intervened, it assumed among other functions the promotion of the physical and mental well-being of the insane. There the function of the State rests to this day; its intervention has not extended legally beyond these requirements. In this respect, at any rate, we have fulfilled the desideratum of John Stuart Mill, who thus expresses himself in his *Essay on Liberty* (9): “A government cannot have too much of the kind of activity which does not impede, but aids and stimulates individual exertion and development. The mischief begins when, instead of calling forth the activity and powers of individuals and bodies, it substitutes its own activity for theirs; when, instead of informing, advising, and, upon occasion, denouncing, it makes them work in fetters, or bids them stand aside and does their work for them.”

Throughout the whole of the theological period the volitional concept exclusively prevailed under the form of demoniacal possession. The philosophic basis of the thought of the period was a kind of dualism, in which by far the greater importance was assigned to the spiritual side of the union. Not only so, but the interests of the body were believed to be antagonistic to those of the soul. In the words of St. Paul: “The flesh lusteth against the spirit and the spirit against the flesh, and these are contrary the one to the other.”

Martyrs, ascetics, and anchorites not only endured the severest penances, but gladly submitted to death for the soul's

sake. It is no wonder, therefore, that the strict discipline of the body was freely resorted to if by that means the interests of the immortal soul could be advanced. There are, however, one or two gross errors which modern writers have been guilty of when commenting on the treatment of the insane in the middle ages. *In the first place*, they have not sufficiently kept in mind that the people of these times displayed such a complete indifference to physical conditions as seems to us almost incredible. They witnessed with apparent pleasure and relish scenes which are to us sickening to read of—tortures, mutilations, executions. They seemed not only able to endure pain and extraordinary physical discomforts themselves with comparative composure, but they inflicted the most diabolical tortures upon others without compunction or remorse. To compare their mental attitude towards suffering, especially physical suffering, with the standards of to-day is manifestly to compare the incomparable. *In the second place*, there has been a misunderstanding of the attitude of the mediæval people towards disease and suffering. So far from neglecting them, many of the religious orders and of the secular priesthood devoted their lives to the relief of suffering, the redress of wrongs, and the care of the sick, including the insane. It has been established beyond doubt that in almost every country in Europe provision was made for the insane in the monasteries and elsewhere. When we think of the middle ages we must blot from our minds the picture of modern Europe with its teeming millions, and imagine a sparsely cultivated continent with a comparatively small and scattered population. In such conditions the number of the insane must have been also small and easily dealt with. I say nothing of the manner of their care, which could not have been worse, but was probably infinitely better than it was in the eighteenth and early part of the nineteenth century. *A third error* into which historians and social writers of all kinds have fallen has arisen through carelessly confusing the treatment of the insane with that of the demoniacs and the so-called witches of the time. A true explanatory account of the extraordinary epidemic manias of the middle ages has yet to be written. That the victims were not lunatics in the ordinary sense is abundantly evident to the most casual reader, and yet we are gravely informed that in France 20,000, in England 30,000 lunatics were

burned or done to death in less than 200 years. Take, for instance, the most recent, probably the last outbreak of epidemic mania in Europe, which occurred only the other day, so to speak. Between 1857 and 1862 the inhabitants of the village of Morzines in Savoy became possessed. The victims of this epidemic, who openly declared themselves to be animated by the Devil, had to be isolated by the police in order that public worship in the local church might proceed uninterrupted, the clergy having failed to exorcise the demons. In the year 1563 Dr. Johann Weyer, a French physician, experimented upon some of these infatuated creatures, and called the disease hystero-demonomania. By tying some old women to their own bedposts he effectually proved that they neither changed themselves into wild beasts, as they said they could do, nor ate young children or corpses, as they—for some strange reason and knowing the consequences—freely declared they had done. I am indebted to Dr. Urquhart for bringing under my notice the fact that Michael Scott's *Discovery of Witchcraft*, published first in 1584, was—for containing views similar to those of Weyer—burned by the hands of the common hangman by order of James I. Things reached a climax in 1670, as the result of a trial for sorcery before the Parliament of Normandy, at which it was affirmed on oath that a rat had been seen talking to a child ten years old. More than 500 persons were concerned in this affair, and 17 were condemned to death, which so disgusted Louis XIV that he not only quashed the convictions, but forbade the parliaments from henceforward to conduct trials for witchcraft. However we of to-day may reprehend the manner of dealing with hystero-demonomania, we must in fairness distinguish between the treatment of the insane under the rule of the Church, and the punishment of the victims of epidemic delusional excitement by the ecclesiastical and civil authorities.

Under the influence of the Renaissance, the Reformation, and the new metaphysical philosophy, the rule of the Church relaxed, and the authority of the mediæval dogmatic theology was sapped and loosened. The tendency of the new movements was to replace the supernatural agent of the theological conception by natural agents inherent in objects themselves. The doctrine of vitalism replaced the concept of the variable action of will, and in lieu of deities it imagined "entities." Hence

arose the theory of disease entities, which replaced the theory of demoniacal possession as the causal concept of insanity.

The belief in disease entities is a mere transition from the earlier belief in demoniacal possession, with this difference, that whereas the demon might possibly be exorcised by spiritual means alone, the entity could only be got rid of by disturbing and drastic remedies of the nature of expulsants, which were almost without exception injurious to the normal functions of the body. The chapters in the history of the insane which deal with the vitalist doctrine of disease entities are incomparably the most repulsive of all, and we gladly pass over them in silence, but we must in justice remember the temper and quality of the times, which we cannot possibly compare with our own. Hardships of all kinds, as we regard them, were very lightly considered, and life was held cheap. The brutal and excessive punishments inflicted for trivial offences, the gross medical and surgical treatment, and the neglect and cruelty practised towards the insane merely reflected the general tone of existing manners and customs. Misconception on these matters has, on the whole, been only too common, for we are apt to forget that our forefathers were as anxious to confer benefits as we are. It is in the kind of benefit that they, and we, hold highest that the difference lies, and in the treatment of disease it is, of course, the conception of what disease is believed to be that distinguishes the medical methods of one age from those of another.

## *II. Period of the Empirical Concept.*

The empirical causal concept rests upon the more or less invariable succession of phenomena. If the phenomenon A is invariably followed by the phenomenon B, it is assumed that A is the cause of B, even though it cannot be shown that any causal connection exists between A and B. The fallacies of the concept are numerous and obvious. For example, we know that night invariably succeeds day, but in this particular instance we also know that day is not the cause of night. Unfortunately in too many other instances where knowledge is imperfect we too readily incline to assume a causal relation between succeeding phenomena where none exists. We can trace the rise of the empirical causal concept from the decay



of the metaphysical philosophy and through the rise of the new materialistic philosophy. It was mainly, however, through the writings of Darwin and the birth of the doctrine of evolution that a new significance was given to the influence of the materialistic philosophy in its application to science. It is true that evolution belongs essentially to the ideal causal concept, which, however, was at that date only faintly foreshadowed. The more ardent materialists and Darwinians of the middle part of the nineteenth century too readily assumed that they had attained finality when in reality they were only embarking on a great voyage of discovery. Psychiatry, no less than the other medical sciences, was swept into the current of this enthusiasm, and a movement commenced in the treatment of the insane, the high tide of which we have just touched, which was of far-reaching consequence to our specialty—indeed, it is not possible to exaggerate the influence of this movement.

I can best illustrate the conception upon which it depended by quoting the words of one of its most active and practical exponents. In his presidential address to this Association in the year 1872, Sir James Coxe, then one of the Commissioners in Lunacy for Scotland, said (10): "But I am ambitious to see them (medical superintendents) exercising their great and legitimate influence in their respective districts, by pointing out how mind depends upon matter, and how insanity is but the expression of a faulty physical constitution having its origin in causes which we can readily trace, and which, in a great measure, are under our control." Again, in the same address, he said (11): "As a rule recovery from insanity is due far more to an adherence to the broad rules of hygiene than to any peculiarity in the treatment. In supplying abundance of food and clothing, in providing a comfortable lodging and bed, in giving proper attention to cleanliness, and in affording ample means of varied occupation and exercise in the open air, lies the great secret of the successful treatment of insanity. Purgatives, hypnotics, narcotics, and tonics are useful as auxiliaries; but a comfortable meal is the best of sedatives, and abundance of exercise the best of hypnotics . . . it follows that insanity is mainly the result of a deteriorated condition of the body generally, and not in any exclusive manner of the nervous system."

To the same effect, but in a different strain, Maudsley wrote

in 1870 (12), and in 1879 (13): "It is strangely overlooked by many who write on this matter that the brain is not a dead instrument, but a living organism, with functions of a higher kind than those of any other bodily organ, insomuch as its organic nature and structure far surpass those of any other organ. What, then, are those functions if they are not mental? No one thinks it necessary to assume an immaterial liver behind the hepatic structure in order to account for its functions." Again, "if one could persuade or compel a strong and turbulent maniac to plough a field, or row several hours a day, or to walk twenty miles a day for a month, taking plenty of nourishment the while, the treatment would do him more good than he would get from all the drugs of the Pharmacopœia."

In quoting these views it is far from my intention to criticise them adversely, much less to hold them up to ridicule. They are honest, strenuous, and virile opinions, far too serious to be lightly treated. My object is to exhibit the origin of a conception of insanity which has profoundly affected us for at least fifty years. The first result of this conception that I shall mention is, that it has been instrumental to a large extent in unifying the standard of the care of the insane under official cognisance throughout Great Britain and Ireland. It accomplished this by gradually increasing the bodily comfort of the insane and their hygienic environment in the larger and more central institutions. By force of example, and by means of the informative and stimulative influence of the central authorities, the remoter and the less advanced local authorities slowly raised their standard of care until, at the present time, it is exceptional to find any insane person in this country who is subjected to official supervision whose condition is conspicuously faulty or seriously neglected. It has also removed defects and abuses, so far as these are not inherent in any system which deals with large masses of human beings, sane or insane. But it did more than this. If the root cause of insanity were physical deterioration, it followed that its treatment lay in the direction of attempting to establish such an environment as would most effectually restore the disordered functions of the body as a whole. It therefore became a paramount duty to provide a sufficiently nourishing dietary, tonic, bracing, but not excessive exercise, sufficiently spacious and comfortable lodg-

ment, and not only strictly hygienic buildings, but, as far as possible, an amount of cheerfulness and brightness in the living rooms which would react favourably upon the morbidly hypersensitive nervous organisations of the insane. Not only so, but strenuous efforts were made to eliminate the "institution" or "barrack" character of the larger asylums, and to conform the surroundings as far as possible to those of ordinary domestic life. Hence the open doors, the abolition of walled airing courts, the villas, the farms, and a score of other devices. The result has been that, taking everything into consideration, the care of the insane in Great Britain has attained a more uniform standard and a more general solidarity than in any other country in the world. I do not say that there are not better features to be found in many other lands, but certainly nowhere else is there such a high average standard of good care.

What, then, from the purely medical standpoint has been the value of this system? It has modified the more distressing symptoms of the mentally disordered to such an extent as to transform the whole aspect of insanity as a disease, compared with the period immediately preceding. We hear occasionally that the type of insanity is changing; there are no doubt grounds for such a view, but to what extent it is true it is difficult to say. One thing, however, is certain, that a lapse from our present methods would result in a very striking alteration in the conduct and demeanour of the insane under care in our asylums. Again, the results of treatment in asylums will bear strikingly favourable comparison with those in ordinary general hospitals. The restoration of the disordered physical symptoms, the discipline, the nursing, the exercise, the employment in the fields, all when judiciously and discriminatively employed, conduce to the recovery of from 30 to 40 *per cent.* of all those admitted to our asylums. Can more than this be hoped for, looking to the nature of the heterogeneous mass of the various cerebral anomalies, physical diseases, and degenerative processes in the human system, which are loosely classified under the heading "insanity"? I am not prepared to answer this question either in the affirmative or in the negative, but content myself with saying that, in the then state of our knowledge, the empirical method had amply fulfilled its purpose. But this is just the point at which the critic enters

with the accusation that our methods are altogether too empirical. I fear we must accept service of this criticism, but with the reservation that our critics have omitted to take into account the vast and honourable progress we have made in less than one hundred years, the services we have rendered to humanity, and the high example we have presented to the world of what can be accomplished on behalf of the most helpless class of mankind. What has in this way been accomplished can never be undone, however advanced our medical appliances and our knowledge of disease processes as they affect the nervous system may in the future become, for the art of medicine is not limited to the exhibition of drugs. This concept of insanity was no doubt a bold confession of ignorance, but a confession devoid of reservations and of dishonest pretensions. The conception, it must be admitted, is, however, too sceptical. One may certainly treat diseases of the liver without assuming an immaterial liver behind the hepatic structure, but a modern physician would scarcely be justified in treating all diseases of the liver on the principle of merely restoring the general physical health, however successful the results of his practice might be.

I cannot pass from this part of my subject without a brief reference to the loss which this Association has sustained through the death of two of its distinguished members who were among the chief exponents in Scotland of the great system I have endeavoured to describe. They were both contemporaries of Coxe, and ardent apostles of the same views. Sir Arthur Mitchell was a man who by his earnestness, his learning, his strong will, his untiring energy, and his genial and persuasive personality would have adorned any profession. These exceptional qualities he devoted with all his might, throughout a long career, to the good of the insane in this country. Dr. James Rutherford, whose services to lunacy in Scotland it would be difficult to over-estimate, carried into practice the views of this vigorous school. As an administrator he was bold to the verge of rashness, but many of his pioneer enterprises are now in general use as ordinary methods of care in Scottish asylums. In every departure he undertook—and they were many—he seemed to be actuated by the desire to ascertain the limits of the conditions of the personal freedom of the insane compatible with their detention in institutions,



and to conform, so far as that was possible, asylum life to ordinary domestic conditions.

Throughout the earlier part of this empirical period, the literature of the specialty will be found to be filled with theories intended to effect an escape from an *impasse* then imagined to be much less intricate than we now know it to be. These theories illustrate, if nothing else, the keen unrest of the medical spirit to emancipate itself and to pursue the study of mental diseases on the same plane upon which general medicine investigates the disorders of bodily organs. Violent diatribes were copiously hurled against metaphysics and theology, which were erroneously regarded as impediments to the freer acceptance of new pathological conceptions. That these accusations were uncalled for is manifest, for there existed no pathological data of any working value upon which to proceed, supposing metaphysics or theology had never existed. "We ought," said Skae, in 1863, when submitting his famous classification from the Presidential Chair of this Association, "to classify all the varieties of insanity, to use a botanical term, in their natural orders or families; or, to use a phrase more familiar to the physician's ear, we should group them according to the natural history of each." "Why should we perpetuate a nomenclature so indefinite and conventional, and which has no other foundation upon which to rest than an imperfect, if not an obsolete, psychology?" "It has been supposed," wrote Griesinger in 1867, "up to the present time that the study of mental disease was distinguished by some difficulty *sui generis*, and that the study of ordinary medicine had no direct bearing upon it—that the only entry to psychiatry lay through the dark portals of metaphysics."

But neither Skae nor Griesinger—the one by means of nosology, the other by treating nervous and mental maladies in the same clinique—could overcome impossibilities; they might fly within the limits of existing knowledge, but they could not possibly overstep those limits. Nor did their railings against metaphysics and psychology avail. Their attempts to advance, which are illustrative of many others, are typical examples of arguing in circles; they convey an illusive sense of progression, but ultimately they return to the point of their departure.

During the very time when this ineffectual unrest against

the limitations of existing knowledge was proceeding in this country and in Germany, the French school were quietly achieving momentous success by means of ordinary clinical observation. Working with the despised psychological terminology and the old empirical methods, and without the aid of modern anatomical or physiological discoveries, men like Esquirol, Baillarger, Bayle, Morel, Lasègue, and Falret succeeded in establishing a new epoch in psychiatry.

Esquirol laid the foundation of paranoia by his description of monomania, and, along with Bayle and Calmeil, described and isolated general paralysis, the most important psychiatric discovery of the nineteenth century. In 1860 Morel published his treatise on hereditary degeneracy, showing for the first time the connection between heredity and degenerative mental and physical conditions, and describing the association of physical stigmata with hereditary mental degeneration.

About the same time Lasègue published his ever-memorable monograph on the insanity of persecution, delimiting that form of insanity from the group of melancholias and monomanias with which it had previously been confounded. Baillarger, and later, Falret, described circular insanity, and taught us the significance and importance of hallucinations of the senses in mental disease. Finally, Magnan, who still survives—the *ultimus Romanorum* of the group—has by his classical contributions to our knowledge of delusional insanity fittingly crowned the labours of his famous predecessors.

The empirical method was, as we have seen, surpassingly successful in the hands of the French school. Their empirical method is just the method by which general medicine, before the advent of the physiological reforms of recent years, achieved its successes, so much so that in the case of certain diseases, for example, phthisis, the discovery by Koch of the tubercle bacillus added little or nothing to the existing symptomatological knowledge of the disease. The discovery fitted into the vacant gap in knowledge. It is the same with the character of the teaching of the French psychiatric school of the nineteenth century. By careful and laborious observation the members of that school laid down the substratum of a knowledge which future discoveries may widen but cannot destroy. The mistake of many eminent writers <sup>(1)</sup> of the same period lay in the belief that our methods of study and our

system of classification were on wrong lines. Classification, over which we have all along disputed, is an unfruitful subject of discussion, for the very fact that we continue to wrangle over it is the surest proof that our knowledge is obscure. When our knowledge is perfected, and only then, shall we have a perfect classification, and only then, probably, shall we cease to dispute about it. The value of any classification lies neither—within limits, of course—in the nomenclature nor in the arrangement of diseases, but in so far as it enables us to form more accurate conceptions regarding diagnosis, prognosis, and treatment.(14) To take one example: Clouston made a distinct step forward when he wrote his description of adolescent insanity, but Kraepelin greatly improved upon this knowledge when he enabled us to see that the group of adolescent insanities, among others, might be split up into two, one of which from the commencement was doomed to dementia, and the other of which did not tend towards dementia. Kraepelin's clinical work, whatever individual reservations may be held regarding it, will hereafter be looked upon as the great psychiatric achievement of the opening of the twentieth century, for the sole reason that it has advanced our conceptions of diagnosis and prognosis. It is a striking example of what can be attained under the empirical method. The purely empirical concept, as exemplified by the work of the French school in the last century, and by Kraepelin in this, is sufficient reminder to us that we are far from having exhausted the resources of the method, and that great undeveloped opportunities lie before us ere it is replaced by the rapidly approaching ideal concept of causation. In this present time, which in certain particulars is a transition period, it is unfortunate that so many appear to be discouraged from pursuing clinical investigation because of the more brilliant results of laboratory research. There could scarcely be a greater mistake. Laboratory research demands as highly technical a training as violin playing, and it is impossible that those who devote their lives to it—as, to be efficient, they must—can at the same time acquire an adequate proficiency in clinical knowledge. The purely scientific investigator must be dependent for advice and information upon the clinician, without whose aid he cannot advance successfully. If the clinician cannot supply the pathologist with a satisfactory description of clinical processes, then assuredly the pathologist

cannot ascertain for him what he should investigate, or tell him what lines of inquiry to follow.

It is for reasons such as these that many of us desire a closer union between general medicine and psychiatry by the establishment in every university in this country of a chair of psychiatry, the occupant of which should be the head of a clinique in the connected medical school, as is the case in every one of the score or so of German universities. Only in this way can scientific research and clinical investigation mutually benefit one another, and the study of mental disease be carried on on an equality with that of other bodily diseases. The proposal emanating from this Association, and now under consideration, which has been most favourably received by every interested medical school and public department to which it has been submitted, to establish post-graduate courses and diplomas in psychiatry is from this point of view of the first importance, and may lead to consequences of great value.

### *III. Period of the Scientific Concept.*

From the point of view to which I have endeavoured to give prominence in the preceding remarks, the progress of psychiatry has been evolutionary, and its evolution has been dependent upon the development of certain phases of human opinion, aided by the influence of the basal causal concepts. The main feature of the scientific concept is continuity—the passing over of the cause into the effect so that they become identical. It is manifest that until we possessed such a knowledge of the minute anatomy of the cerebral cortex as we now do, a proper realisation of the scientific concept of causation was an impossibility. For this knowledge we owe an unceasing debt of gratitude to Professor Bevan Lewis, who has just vacated this Chair. His pioneer studies in cortical lamination alone, to say nothing of his pathological researches, have not only enriched our knowledge, but have helped to lay the foundations of a new epoch. Bevan Lewis, Cajal, Golgi, Nissl, and Flechsig, to mention a few of the principal workers in this sphere, have laid down the stepping stones over which we are slowly passing from the old order to the new. On the physiological side, again, we must recognise the value of cerebral localisation, the mapping out of the different cortical functional areas, which we



owe, among others, to Hitzig, Ferrier, and Horsley. Finally, we have to take into account the work of numerous neurologists and pathologists who have described the effects of cerebral lesions upon sensation, motion, speech, and thought.

*The first effect* of the advent of the new concept has been to alter our attitude towards those psychic and moral causes which were formerly accepted without question as fully accounting for the incidence of insanity. As this is of the very essence of the scientific causal concept, I feel that I must be quite explicit. It would be absurd to deny that moral or psychic events, which produce mental shock or prolonged worry, do not act injuriously upon the nervous system ; we may even go a step farther and admit that they may produce psychic lesions of a functional nature, whatever meaning we may choose to assign to such an indefinite phrase. But a statement like this does not satisfy the new conception. Suppose, for example, an individual, on the receipt of bad news, or under the influence of strong emotion, is suddenly stricken down with cerebral apoplexy. Such a case has never occurred in my experience, but I can conceive its mechanism, and I am bound to accept credible medical testimony on this point, however sceptical one may be of similar accounts in lay literature. Should such a case occur in the practice of a modern physician, he would at once proceed to locate the cerebral lesion, to estimate its extent, to examine the arterial system and the blood-pressure, and to base his diagnosis, prognosis, and treatment wholly upon these clinical facts. In such a case the extravasation of blood from a sclerosed vessel, say in the corpus striatum, in a man past middle age with a gouty constitution, make up the chain of facts which alone satisfies the demands of the scientific causal concept. While the moral shock is interesting as an interpolating event, which suddenly raised the blood-pressure (which many other circumstances might equally have done), the pathological chain of causes passes without interruption into the culminating event—the apoplexy. If I have made myself clear, and if I have convincingly stated the case, we perceive at once the essential difference between the empirical and the scientific causal concepts, as they affect our views of disease. But when we pass from a consideration of the grosser nervous diseases of the brain to the more purely mental affections, we are at once confronted with numerous difficulties, which at first sight appear

insuperable. Before I discuss these difficulties, it is well to mention the ætiological advances in psychiatry which the scientific causal concept has almost imperceptibly achieved within the past few years. Not many years ago general paralysis, perhaps the most minutely studied of all forms of insanity, presented, to the ordinary psychological methods of examination, such a variety of symptom, especially in its earlier stages, as often to lead to mistaken diagnosis. When, two or three years ago, Wassermann discovered his now famous reaction, the ætiology of the disease was at once transferred from the empirical to the scientific category of causation. Thyroid insufficiency, as exhibited in endemic and sporadic cretinism, and in the myxœdema of adults, gives rise to a definitely characteristic set of symptoms, which, although we do not yet fully understand thyroid action, are sufficient to justify us in placing this group also in the sphere of the new concept. An immensely important new field of investigation is all but explored—the study of the production of arterio-sclerosis. When the influence of the supra-renal capsules and the equally important influence of exogenous and endogenous toxins upon blood-pressure and arterio-sclerosis are better understood, we shall at once enter upon a vast fund of explanatory knowledge touching innumerable phases of mental decay.

*The second effect* of the influence of the scientific causal concept is evidenced by the gradual replacement of the belief in disease entities, which has descended to us through the centuries, by the concept of “syndromes” dependent upon underlying cerebral lesions. Instead of thinking of, say, “mania” or “melancholia” as disease entities, we prefer to think of them as “syndromes,” which we are content to designate by the same names. To say that we are merely juggling with words in so doing is to miss the whole significance of the altered attitude. Lugaro(15) defines syndromes as “groups of symptoms associated together by some common factor in the anatomical, physiological, and pathological conditions.” Mania and melancholia, for instance, may either occur apart from one another, in which case they are separate symptoms of one or more pathological conditions, or they may occur as parts of the complex syndrome which was first described by Kraepelin as manic-depressive insanity, in which latter case they are symptoms of another and different type of pathological condition. As

Lugaro (16) aptly illustrates, "progressive blindness—due to atrophy of the optic nerve—and loss of the patellar reflex undoubtedly occur separately as the result of different causes, but their association suggests the action of a tabetic process, the late result of a syphilitic infection." That we are still far from a knowledge of the pathological conditions which underlie the various mental syndromes is only too true, but we have advanced so far as to realise the utility of substituting the syndrome for the disease entity. When we have still farther advanced, the psychological syndrome will have become subsidiary to a knowledge of the underlying pathological condition.

*A third effect* of the scientific causal concept has been to define the limits of our knowledge respecting the functions of mind and matter as they enter into the mysterious combination of human personality, and to simplify our views of the nervous system. At last we are freed not only from the older metaphysical doctrines, but also from the teaching of the materialistic philosophy. Not that we know what mind is, but that we are content to believe that we may never know; nor do we claim to know what matter is. In his magnificent exposition of sceptical philosophy Professor Karl Pearson (17) says: "We are like the clerk in the central telephone exchange, who cannot get nearer to his customers than the end of the telephone wire. We are, indeed, worse off than the clerk, for, to carry out the analogy properly, we must suppose him never to have been outside the telephone exchange, never to have seen a customer—in short, never, except through the telephone wire, to have come in contact with the outside universe. Of that 'real' universe outside himself he would be able to form no direct impression; the real universe for him would be the aggregate of his constructs from the messages which were caused by the telephone wires in his office. About those messages, and the ideas raised in his mind by them, he might reason and draw his inferences; and his conclusions would be correct—for what? For the world of telephonic messages, for the type of messages which go through the telephone." To this picture of our limitations we must humbly subscribe. Each of us constructs from our sense-impressions a phenomenal world, and the fact that the phenomenal world of one man closely resembles that of another is a sufficient proof of the similarity of the nature of the sense-impressions which proceed

from the environment of each of us, as well as of the identity of the functions and structure of the human nervous system.

Upon the clarity of our views of the functions of the nervous system will depend, largely, our conception of insanity. To guard against confusion in this respect we must most carefully define to ourselves what we mean by such expressions as "stored impressions," "mental pictures," "centres for the association of ideas," and a host of similar phrases. It may be replied that these are legitimate psychological terms. But psychology is one science and physiology is another. Undoubtedly there have been great achievements in the psychological investigation of certain types of nervous affection by such men as Janet, Freud, and Jung, of which I am not qualified to speak, but any measure of success attained by such men has been attained because they adhered strictly to their own empirical psychological methods.

We can hardly open a treatise on psychiatry or a text-book on neurology which does not contain references to "latent images," "deposited memories," or "association centres." It is no wonder that lay literature should follow suit, and that a paragraph like the following can appear in a leading English review. (18). Writing of a famous novelist the author says: "When the mind in question glows with a larger number of stored-up images of anterior perceptions than are wont to be deposited in any save the most sensitive brain stuff, every fresh onset of outside sensation produces a wonderful chromatic emotional atmosphere." If this sentence suggests anything comprehensible, it conveys the idea that the brain is a photographic apparatus, and that each cell is a kind of sensitive plate which not only records images of the outside world, but stores them and reproduces them at will. A more unthinkable proposition was never formulated.

Even such an eminent physiologist as Flechsig writes of "association centres" and "intellectual areas" as if these actually existed. As Höffding says, in his criticism of Flechsig on this point: "The psychological inadequacy of his concept of association sufficiently shows how difficult an undertaking it is to replace psychological with physiological conceptions."

Are we, then, to be debarred from the use of psychological terms in our description of mental diseases when there is scarcely a term in general use in psychiatry which has not had



a psychological origin? To the use of these symbolic terms objection would be futile, if not harmful, but it must always be remembered that they are only symbols of symbols; the danger lies in *thinking* psychologically while we are *acting* physiologically, and for that reason it is necessary that we should accept with strict reservation such cardinal psychological ideas as "stored impressions," "deposited images," and "intellectual areas." Any semblance of valid argument in favour of "deposited memories" and "stored images" is deduced from the cerebral pathology of aphasic conditions, but when the facts are carefully analysed it vanishes absolutely, and we see that it is the faculty of recollection which is weakened or abolished when the local sensory or motor centres are diseased or the connecting fibres or neurons between these centres are injured.

The physician who attempts to reconcile physiological and psychological methods is attempting the impossible, for the scientific causal concept cannot operate in the sphere of psychology. Psychical states are discontinuous, often unrelated to one another, immaterial, non-spatial, qualitative, and, for all these reasons, non-measurable. Physiological states, on the other hand, are related to one another, continuous, material, spatial, quantitative, and therefore measurable. All our certain enduring advances have been made in the physiological field. We often regret the tardiness of our progress, but we should not forget that every inch gained physiologically is solid, irrefutable ground which may be safely built upon.

What, then, should be our conception of the nervous system? For what it is worth I give the conception I myself incline to. The nervous system, in its psychic aspects, will probably always remain a mystery, but there is no greater or more insoluble mystery in the higher cerebral than in the lower spinal centres. We imagine we understand a spinal reflex action. If we do—and we need not cavil over the point—then I hold emphatically that in the same physiological sense we understand all the functions of the nervous system. The nervous system, when all is said, is a sensori-motor mechanism of various degrees of complexity. It is constantly acted upon by perturbations from the material world, including those of its own living habitat, the body, and is constantly responding to these perturbations. But—and herein lies a difficulty—it

selects from the mass of the material impressions constantly impinging upon it certain impressions and ignores others, which are either not received or remain subconscious. The selected impressions are those conveying ideas of benefit or danger to the individual, and according as the impressions belong to the one or the other of these categories the nervous system reacts upon the external world. Whether the reaction is actually transmitted into motion or merely remains latent an intention to act is formed, and that intention is the flash-point of momentary consciousness. The frequent repetition of a sensori-motor reaction establishes an habitual memory, whether the reaction takes place in the spinal cord or in the highest cortical centre, which memory must be most carefully distinguished from the psychic act of "recollection." We can each of us recall what we please ; at any moment we can summon up our sins, sorrows, joys, or past experiences, real events or imaginary events, and, more wonderful still, we can tack these or any of them on to the actual consciousness of the moment, and sail off into an imaginary future with this motley congeries of ideas. When we reach this plane we are, in my humble opinion, in the region of the Psyche, and neither psychology nor physiology can explain it.

It is open to anyone to formulate any theory he pleases regarding the "Psyche"; with such theories I have here no concern. My object has been to show that there is a gap in our knowledge which may never be bridged, and at the same time to urge that our obvious duty as psychiatrists is to work our laborious way up to the edge of our side of this gap by means of the ordinary methods of investigation ; there is sufficient to occupy all our energies in this task for many long years.

Gentlemen, I have done. I should have liked to refer to some of those profound changes which the scientific causal concept is almost certain to affect in the theory and practice of the future, but time does not permit.

I have endeavoured to review the history of those main conceptions of insanity which have profoundly influenced our own opinions on the subject and those of our predecessors from a very early period. I have also endeavoured to show that, running through and modifying these conceptions, from the introduction of Christianity into Europe until the present time,

has been the strong religious element of altruism which has actuated and moulded every sincere effort for the better care and treatment of the insane. When we hear it said, not infrequently on high authority, that these efforts are fanciful, or wasteful, or incommensurate with utilitarian results, we may calmly assure ourselves that the forces fighting for us are infinitely stronger than those against us, and that the harsh tenets of the philosophy of Nietzsche cannot prevail against that older, milder gospel of which Tolstoi is the modern prophet.

(<sup>1</sup>) It must, however, be frankly admitted that the teaching of Morel and of Skae had the effect of introducing into psychiatry the essential clinical element of physical symptoms correlated with mental symptoms.

## REFERENCES.

- (1) Hoffding, *Problems of Philosophy*, p. 66.
- (2) *Hereditary Genius*, p. 329.
- (3) *Social Life in Greece*, chap. v.
- (4) *History of Philosophy*, vol. i, p. 405.
- (5) Benjamin Kidd, *Social Evolution*, p. 149.
- (6) *History of European Morals*, vol. ii, p. 114.
- (7) *Body and Mind*, p. 117.
- (8) *Journal of Mental Science*, vol. xii, p. 326.
- (9) P. 106.
- (10) *Journal of Mental Science*, vol. xviii, p. 333.
- (11) *Loc. cit.*, p. 318.
- (12) *Body and Mind*, pp. 324-5.
- (13) *Pathology of Mind*, p. 563.
- (14) Dr. Bernard Hart, *Journal of Mental Science*, vol. liv, p. 458.
- (15) *Problems in Psychiatry*, p. 224.
- (16) *Loc. cit.*, p. 225.
- (17) *Grammar of Science*, p. 61.
- (18) *Quarterly Review*, April, 1910, p. 408.
- (19) *Problems of Philosophy*, p. 35.

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*Lunacy Administration in Scotland, with Special Reference to the Royal Asylums.*(<sup>1</sup>) By A. R. URQUHART, M.D., F.R.C.P.E., Royal Asylum, Perth.

*The legal system.*—Scotland is fortunate in its legal system, which has proved elastic enough to permit of the adoption of new ideas as they ripen and mature. The representative of law and order in each county or group of counties is the sheriff, an advocate of proved skill and experience who visits



Home Office,  
Whitehall,

2<sup>nd</sup> August 1910

Sir,

I am commanded by The King to convey to you hereby His Majesty's Thanks for the Loyal and Dutiful Address of the Council and Members of the Medico-Psychological Association on the occasion of the lamented death of His late Majesty King Edward the Seventh.

I am to say that the expression of sympathy with Queen Alexandra has been laid before Her Majesty, who desires me to communicate to you Her Thanks.

I am,  
Sir,

Your obedient Servant,  
The General Secretary  
Medico-Psychological Association,  
Lions and St. Ann's Hill.

11 Chandos Street

W





his sheriffdom at intervals to deal with such cases as may be submitted to his judgment. He hears appeals from the decisions of his substitute, who is also an advocate selected by the Government in recognition of his abilities, and who resides within his own jurisdiction. Thus, legal matters are dealt with by lawyers who are competent and accessible. They are distributed over the country in positions of independence, and hold their courts in such manner as to command the respect and confidence of the people. The tendency is to decentralisation, to demand of the sheriffs more work and more important work. For instance, it is often necessary to appoint a *curator bonis* to an incompetent person. Formerly that appointment was invariably made by the Supreme Court, the Court of Session in Edinburgh. But the expense of that procedure bore heavily upon the poorer class, and therefore it was enacted that the Sheriff should deal with those cases, provided that the annual value of the estate does not exceed £100 yearly.

In the year 1815 an Act of Parliament put lunacy administration in some semblance of order. The sheriffs were empowered to grant licenses for keeping asylums, inspectors were elected, it was laid upon the sheriffs to grant orders for the detention of insane persons on medical certificates and to ascertain if they were properly confined. The results were not satisfactory. Great numbers of the insane were in a deplorable condition until the middle of the last century. They had many and powerful advocates, but those were unable to persuade Parliament to effective action. The royal asylums had been provided, and numerous private asylums existed, but they were unable or unfitted to cope with the necessities of the insane. In 1837 Dr. W. A. F. Browne wrote a memorable book on asylums, "as they were, are, and should be," and many others might be named who were urgent in their endeavours to induce the country to do justly by the insane. The advent of Miss Dix "the American invader," in 1855, was a crucial point in those long-drawn debates. To her is due the credit of obtaining a Royal Commission of Enquiry, and upon the report of that commission the present Lunacy Law of Scotland was established.

*Statistical notes.*—Appended is a table showing the distribution of the insane on January 1st, 1858, compared with the conditions at the beginning of last year, as reported by the General Board of Lunacy :

*Statistics of January 1st, 1858 and 1909.*

Class.	Year.	Public asylums.	Private asylums.	District asylums.	Idiot schools.	Poorhouses and parochial asylums.	In private houses.	Total.
Private . {	1858 .	786 .	196 .	0 .	23 .	6 .	?	1011
	1909 .	1940 .	90 .	329 .	204 .	0 .	119 .	2682
Pauper . {	1858 .	1594 .	520 .	0 .	6 .	833 .	1784 .	4737
	1909 .	1701 .	0 .	9380 .	261 .	1296 .	2877 .	15515
or								
	Year.	Males.	Females.	Total.	Proportion to population.			
	1858 .	2718 .	3030 .	5748 .	= 1 in 522			
	1909 .	8892 .	9305 .	18197 .	= 1 in 268			

The main features of this statement are: (1) the great increase of reported insane persons between 1858 and the end of the year 1908; (2) the increase in proportion to the population of Scotland; (3) the great increase of private patients, and the moderate increase of pauper patients in the royal asylums; (4) the development of district asylums with a certain proportion of private patients; (5) the abolition of private asylums in respect of pauper patients, and the notable diminution of private patients maintained in them; (6) the great increase of idiots in training schools; (7) the great increase in licensed poorhouses, and the number of boarded-out pauper insane.

A general increase of the cases of mental defect and disorder is common national experience. It is largely due to better methods of dealing with them. When the statement is scrutinised there are familiar reasons in explanation of the statistics, but in Scotland, at least, there are signs that the high-water mark possibly has been reached. The Commissioners give the following table showing the proportion of the insane per 100,000 of the estimated population of Scotland since 1904:

January 1st.	Private.	Pauper.	Total.
1904 .	52 .	307 .	359 .
1905 .	52 .	311 .	363 .
1906 .	51 .	312 .	363 .
1907 .	50 .	312 .	362 .
1908 .	51 .	314 .	365 .
1909 .	51 .	315 .	366 .

The rise last noted was due to accumulation, as the Commissioners show a diminution in the numbers placed on their register in the last-named year.

*District asylums.*—The Lunacy Act provided for most urgently required accommodation by the erection of district asylums. It had become evident that the royal asylums could not cope with the wants of the country, and, indeed, they have not shown any considerable increase in the numbers of their pauper patients, while the private asylums no longer deal with that class. Broadly the position in 1855 was that the royal asylums could not meet the demands made upon them; it was imperative to provide suitable accommodation and to extinguish unsuitable. That was made a national undertaking on lines which have stood the test of time and demonstrated the wisdom and prescience of those who initiated it. Contracts were entered upon between the district lunacy boards established by the Act and the directors of royal asylums in localities where the arrangement was and continues appropriate, but it was immediately evident that contracts for the erection of district asylums were called for imperatively, and in a few years these were opened in Inverness-shire, Banffshire, Perthshire, Argyllshire, Stirlingshire, Fifeshire, Ayrshire, Midlothian, Haddingtonshire, and Roxburghshire. Later additions were made, such as Lanarkshire, Glasgow, etc. The following table (p. 616) shows the present establishments, and the distribution of the insane in Scotland on January 1st, 1909.

It will be observed that the royal and district asylums largely predominate in the above printed return, that they deal with private and pauper patients to the number of 13,350, that the private asylums contain only 90 private patients and not one pauper. The Commissioners found that the great majority of the private asylums of 1855 were unsuitable in every respect. Many of them were abolished within a few years, and a dark chapter in Scottish history was closed. The shameless competition for unfortunate persons at rates of maintenance which could not be regarded as sufficient was brought to an end, not so much by the operations of law as by steady, calculated pressure which extinguished the unfit. On the other hand, those few private asylums which survived continue to serve a useful function, and to fulfil modern requirements for those who prefer the privacy of houses directed by distinguished physicians.

The *parochial asylums* are few in number, and require some explanation. They are practically poorhouses with un-



Asylum.	Name of superintendent.	Number of patients.				Total.
		Private.		Pauper.		
		M.	F.	M.	F.	
Aberdeen Royal Asylum . . . . .	Dr. Reid . . . . .	139	160	233	266	798
Dumfries Royal Institution . . . . .	Dr. Easterbrook . . . . .	217	266	155	190	828
Dundee Royal Asylum . . . . .	Dr. T. Mackenzie . . . . .	29	34	—	—	63
Edinburgh Royal Asylum . . . . .	Dr. Robertson . . . . .	196	234	152	156	738
Glasgow Royal Asylum . . . . .	Dr. Oswald . . . . .	177	235	2	—	414
Montrose Royal Asylum . . . . .	Dr. Havelock . . . . .	52	74	255	292	673
Perth Royal Asylum . . . . .	Dr. Urquhart . . . . .	63	64	—	—	127
Aberdeen District Asylum . . . . .	Dr. Alexander . . . . .	—	—	220	194	414
Argyll District Asylum . . . . .	Dr. Shaw . . . . .	14	18	220	211	463
Ayr District Asylum . . . . .	Dr. MacRae . . . . .	11	17	258	251	537
Banff District Asylum . . . . .	Mr. Fowler . . . . .	1	4	95	88	188
Dundee District Asylum . . . . .	Dr. T. Mackenzie . . . . .	—	—	189	214	403
Edinburgh District Asylum . . . . .	Dr. Keay . . . . .	—	—	361	380	741
Elgin District Asylum . . . . .	Mr. Hendry . . . . .	1	9	67	89	166
Fife District Asylum . . . . .	Dr. Turnbull . . . . .	—	11	287	310	608
Glasgow District Asylum, Gartloch . . . . .	Dr. Parker . . . . .	—	—	404	361	765
" " " " " Lenzie . . . . .	Dr. Marr . . . . .	—	—	555	517	1072
Govan District Asylum, Hawkhead . . . . .	Dr. Watson . . . . .	4	8	316	249	577
Haddington District Asylum . . . . .	Mr. Macrae . . . . .	5	8	64	80	157
Inverness District Asylum . . . . .	Dr. Mackenzie . . . . .	8	7	345	355	715
Kirklands Asylum, Bothwell . . . . .	Dr. Skeen . . . . .	—	—	114	108	222
Lanark District Asylum . . . . .	Dr. Kerr . . . . .	33	48	473	383	937
Midlothian District Asylum . . . . .	Dr. Mitchell . . . . .	12	35	152	126	325
Perth District Asylum . . . . .	Dr. Bruce . . . . .	1	2	186	185	374
Roxburgh District Asylum . . . . .	Dr. Johnstone . . . . .	16	18	152	150	336
Stirling District Asylum . . . . .	Dr. Campbell . . . . .	20	18	371	300	709
<b>Totals in royal and district asylums . . . . .</b>		<b>999</b>	<b>1270</b>	<b>5626</b>	<b>5455</b>	<b>13350</b>
Balgreen . . . . .	Sir John Batty Tuke . . . . .	1	7	—	—	8
New Saughton Hall . . . . .	Do. and Dr. J. Batty Tuke . . . . .	28	44	—	—	72
Westermains . . . . .	Mr. Lawrie . . . . .	2	8	—	—	10
<b>Totals in private asylums . . . . .</b>		<b>31</b>	<b>59</b>	<b>—</b>	<b>—</b>	<b>90</b>
Greenock Parochial Asylum, Greenock . . . . .		—	—	135	120	255
Paisley Parochial Asylum (Craw Road), Paisley . . . . .		—	—	42	53	95
Paisley Parochial Asylum (Riccartonbar), Paisley . . . . .		—	—	98	112	210
<b>Totals in parochial asylums . . . . .</b>		<b>—</b>	<b>—</b>	<b>275</b>	<b>285</b>	<b>560</b>
<i>Lunatic Wards of Poorhouses with unrestricted Licences.</i>						
Buchan Poorhouse . . . . .		—	—	24	27	51
Cunninghame Poorhouse . . . . .		—	—	44	45	89
Dumbarton Poorhouse . . . . .		—	—	27	29	56
Dundee East Poorhouse . . . . .		—	—	45	47	92
Govan Poorhouse . . . . .		—	—	95	99	194
Inveresk Poorhouse . . . . .		—	—	15	14	29
Kincardine Poorhouse . . . . .		—	—	22	18	40
Linlithgow Poorhouse . . . . .		—	—	18	18	36
Long Island Poorhouse . . . . .		—	—	16	9	25
Old Monkland Poorhouse . . . . .		—	—	25	25	50
Perth Poorhouse . . . . .		—	—	19	20	39
Wigtown Poorhouse . . . . .		—	—	20	15	35
<b>Totals in poorhouses with restricted licences . . . . .</b>		<b>—</b>	<b>—</b>	<b>370</b>	<b>366</b>	<b>736</b>
<b>General totals . . . . .</b>		<b>1030</b>	<b>1329</b>	<b>6271</b>	<b>6106</b>	<b>14736</b>

*The Daily Rate of Maintenance for Each Mode of Providing  
for the Pauper Insane in Each County of Scotland during  
the Year ending May 15th, 1908.*

COUNTIES.				General averages. (This also includes the extra expenditure for certificates of lunacy, cost of transport, etc.)	Percentage of patients.		
	In royal, district, and parochial asylums, and training schools for imbecile children.	In licensed wards of poor-houses with restricted licenses.	In private dwellings.		In royal, district, and parochial asylums, and training schools for imbecile children.	In licensed wards of poor-houses with restricted licenses.	In private dwellings.
	s. d.	s. d.	s. d.	s. d.			
1. Aberdeen . . .	1 7½	0 11½	0 11	1 6½	82·2	6·2	11·6
2. Argyll . . .	1 3	—	0 11½	1 3	81·4	—	18·6
3. Ayr . . .	1 5½	0 10½	0 11½	1 4	73·1	16·4	10·5
4. Banff . . .	1 2½	—	0 10½	1 1½	70·3	—	29·7
5. Berwick . . .	1 7	—	0 10½	1 5½	70·8	—	29·2
6. Bute . . .	1 2½	—	1 0	1 3	81·3	—	18·7
7. Caithness . . .	1 9½	1 2½	0 9½	1 4½	52·0	1·9	46·1
8. Clackmannan . . .	1 5½	1 6½	1 0½	1 5½	80·6	1·5	17·9
9. Dumbarton . . .	1 6	0 11½	1 1½	1 4½	65·1	20·1	14·8
10. Dumfries . . .	1 3½	—	0 11½	1 3½	88·6	—	11·4
11. Edinburgh . . .	1 9½	0 8½	1 2	1 8	75·7	1·3	23·0
12. Elgin . . .	1 3½	—	0 10½	1 3½	80·7	—	19·3
13. Fife . . .	1 5	—	1 0½	1 5	85·9	—	14·1
14. Forfar . . .	1 6½	1 4½	1 1	1 6	72·8	9·9	17·3
15. Haddington . . .	1 5	0 9	1 1½	1 5	87·8	5·7	6·5
16. Inverness . . .	1 3½	1 6½	0 9½	1 1½	55·1	2·4	42·5
17. Kincardine . . .	1 9	0 11½	0 11	1 7½	76·0	16·7	7·3
18. Kinross . . .	1 5	—	0 10½	1 5	96·3	—	3·7
19. Kirkcudbright . . .	1 4	—	1 0	1 4	90·5	—	9·5
20. Lanark . . .	1 5½	1 1½	1 1½	1 5	78·9	5·6	15·5
21. Linlithgow . . .	1 6	1 4½	1 1	1 6	70·7	18·3	11·0
22. Nairn . . .	1 4	—	0 10½	1 3	74·0	—	26·0
23. Orkney . . .	1 9½	—	0 9½	1 6½	66·6	—	33·4
24. Peebles . . .	1 5½	—	1 1½	1 5½	97·6	—	2·4
25. Perth . . .	1 5½	1 2½	1 1	1 4½	77·5	6·8	15·7
26. Renfrew . . .	1 6½	1 2½	1 2½	1 6½	88·3	0·7	11·0
27. Ross . . .	1 3½	—	0 8½	1 1	56·5	—	43·5
28. Roxburgh . . .	1 7	—	1 0½	1 7	88·1	—	11·9
29. Selkirk . . .	1 7½	—	1 0½	1 7½	91·9	—	8·1
30. Shetland . . .	1 9½	—	0 8½	1 6	66·1	—	33·9
31. Stirling . . .	1 5½	1 3	1 1½	1 5½	80·4	1·5	18·1
32. Sutherland . . .	1 3½	—	0 8½	1 1½	66·0	—	34·0
33. Wigtown . . .	1 3½	1 0½	0 10½	1 3	64·0	16·3	19·7
General averages	1 6	1 1½	1 0	1 5½	76·8	4·8	18·4

restricted licences. It has been a feature of Scottish administration to license wards in poorhouses for the reception of chronic and harmless patients. These parochial establishments are not used for those who require curative treatment, nor are they used as reception houses where acute cases may accumulate until it is convenient to send them to the asylums. They receive cases from the asylums for whom expensive treatment is not required and for whom boarding-out is not considered expedient. It will be seen from the return that there are only 736 patients distributed among twelve poorhouses. On the other hand, parochial asylums (<sup>2</sup>) are not restricted to the reception of chronic cases, but are rather a survival of less satisfactory methods of administration. Certain parishes owning asylums have been granted District Boards of Lunacy, and so conform to the description of district asylums, such as Dundee and Govan. It is felt that district asylums might be empowered to add accommodation for private patients and thus increase their usefulness, and it will be observed that even as matters stand there is a movement in this direction. There were no district asylums in 1855, and now they deal with 9,380 patients of the pauper class, besides 329 who are wholly maintained from private sources.

*The boarding-out system.*—No discussion of Lunacy Administration in Scotland is complete without reference to the boarding-out system; but it has been so often described in detail that it is unnecessary to do more than point out that the patients so maintained have apparently greatly increased in numbers, that their condition is favourably reported upon by the Deputy Commissioners, and that the country is fortunate in continuing this method of administration, which returns chronic patients to home life and at the same time lessens the national expenditure upon the insane.

*The poor private insane.*—There is a large class of private patients who are in poor circumstances, and the following table shows the rates of board per annum charged by the royal asylums in the endeavour to meet their narrow means, especially assisting those who belong to the locality served by each :

Royal asylum.	Minimum rate.		
	£	s.	d.
Aberdeen . . . . .	30	0	0
Dumfries . . . . .	25	0	0

Royal asylum.	Minimum rate.		
	£	s.	d.
Dundee . . . . .	25	0	0
Edinburgh . . . . .	32	10	0
Glasgow . . . . .	26	0	0
Montrose . . . . .	25	0	0
Perth . . . . .	30	0	0

By these moderate payments it is sought to conserve that spirit of independence which animated Scotland, and to avoid the necessity of appealing for help to parochial authorities.

*The royal asylums of Scotland* were established by the exertions and benevolence of private individuals long before legislative enactments compelled the erection of asylums for pauper patients. They are also called chartered asylums, because each has a Royal Charter of Incorporation. At first they all received pauper as well as private patients, but, later, there has been a tendency to reserve them in whole or in part for the insane of the middle classes. It has been felt that the charity of the founders should not form a grant in aid of the ratepayers to relieve them of the obligations imposed by law. The royal asylums are seven in number, and the oldest is at Montrose, erected in 1781. The only aid given by the Government to these asylums was a grant of £2,000 in favour of Edinburgh, the erection of which was advocated specially for those who belonged to the cultured classes and those who were in straitened circumstances. Of the seven royal asylums five were built by public subscription, and two were endowed by charitable founders. There is reason to believe that no other country proportionately to its population and resources voluntarily did so much for the care of the insane in advance of the laws which now govern administration. Unfortunately this practical benevolence has been swamped by the necessarily compulsory erection of district asylums, and it is now uncommon to find charitable persons aiding the royal asylums by endowment. Mr. T. W. L. Spence, Secretary of the General Board of Lunacy, has reminded us that in 1857 the great bulk of the insane in Scotland, both of private and pauper patients, so far as they were in institutions at all, were provided for in royal asylums, in regard to which the Royal Commissioners expressed themselves as being gratified "to be able to report that they are in many respects in a highly satisfactory state." A perusal



of that report shows clearly that, viewed in the light of their own time, these asylums were, as a rule, excellent institutions providing in an enlightened and humane manner for the care and treatment of the insane committed to them. Some fifty years ago the directors of Murray's Royal Asylum found that the Charter did not permit them to receive paupers, although they were empowered to admit local patients not belonging to that class at such unremunerative rates as they might think fit. Within recent years the Glasgow Royal Asylum has been similarly set apart for the admission of private patients only, and the Royal Edinburgh Asylum, by authority of the Court, has been freed from the incubus of maintaining pauper patients for less than they cost. There is an equivocal meaning underlying the word "pauper." Mr. Spence showed some years ago that four-fifths of the paupers under cognisance of the board were reduced to that status solely by reason of their mental inability. They were obliged to seek relief from parochial rates for that very reason, so that the burden of insanity falls upon the people in a manner that can be discriminated from the ordinary obligations of parish councils. (The inspector of poor, the official of the parish council, is bound to deal with the case of any insane person submitted to his notice, whether rich or poor. Naturally those who are under the protection of their friends and in reasonably good circumstances do not require the interference of the inspector of poor and the aid of the parish council, but the law provides this general remedy in case of difficulties occurring.)

In 1855 it was found that the total capital expenditure made by the several royal asylums for lands, buildings, and furniture, amounted to £352,632. That sum has been steadily increased year by year, mainly out of surplus revenue derived from the maintenance of well-to-do patients, until it amounts to considerably more than a million pounds sterling.

The Elgin District Asylum was also built in a remarkably public-spirited manner on ground given by the Trustees of Gray's Hospital. The proprietors of the county agreed to a voluntary assessment to defray the expense of the erection of the asylum, which was opened in the year 1835, and eventually came under the Lunacy Act of 1857 as a district asylum. Before that year it was a small public asylum, containing forty-three patients.

About the year 1855 a strenuous attempt was made to erect an asylum at Inverness, and subscriptions were obtained to the amount of £5,000. That money was not used for the purpose, for the Lunacy Act made provision for the erection of a district asylum at the cost of the county and the subscriptions were returned.

*Aberdeen Royal Asylum*, founded in connection with the Infirmary, under the same managers; built by voluntary contributions. Opened in 1800; later, rebuilt and disjoined from the Infirmary, which had been unduly benefiting by the joint management. Consists of four main buildings: (1) The original house containing both pauper and private patients at low rates of board; (2) in the immediate proximity a modern hospital for acute cases; (3) the detached establishment for private patients paying £60 and more per annum; (4) an estate and mansion in the country at some distance, principally occupied by working patients. Extent of grounds, 330 acres. Accommodation, 1,000 beds. The charitable area of the institution includes Aberdeenshire. Income from board paid for patients, assisted by a small charitable fund—total, £30,000 in 1909. Lectures on mental diseases in connection with the University.

*Dumfries Royal Asylum*.—The Crichton Royal Institution was founded by the widow and trustees of the late Mr. James Crichton of Friar's Carse, whose name it bears, and the residue of whose estate was devoted to its endowment. The institution was opened in 1839, when the first house, now reserved for private patients, was completed. A second house, containing both private and pauper patients, was opened in 1849. There is a charitable fund from which grants are made to patients in straitened circumstances belonging to the locality. The institution was greatly extended by the late Dr. Rutherford during the last twenty-five years. When he retired the property extended to 1,300 acres, including the estate of Friar's Carse above mentioned, and there were fourteen houses available for patients. (Since that time, however, Friar's Carse has been sold. An appreciative notice of Dr. Rutherford's life appeared in the *Journal of Mental Science* for April, 1910, and it may be referred to for details regarding this asylum.) Accommodation, 900 beds. Income from board paid for patients, £44,292 in 1909.

*Edinburgh Royal Asylum.*—Built by voluntary contributions aided by a small Government grant. Opened in 1813. Consists of two main buildings with various succursal houses: (1) The East House, the original establishment, has been sold, and is now replaced by New Craig House, on the estate which lies to the west of the Morningside property and extends to 62 acres. In 1879 Old Craig House was adapted for the reception of private patients at the higher rates of board, and nearly twenty years ago a modern asylum for the same class of patients was erected in its proximity. The central building receives about 100 patients, and adjoining it are detached hospitals and villas of moderate size. (2) The West House, opened in 1842, receives patients at the lower rates of board and paupers. Separate wings were adapted for the reception of acute cases, but that plan is no longer continued. The whole extent of the grounds is about 120 acres. Accommodation, 900 beds. Income from board paid for patients, £50,552. The poorer class are assisted from charitable funds, which amount to a capital sum of £22,388. Lectures on mental diseases in connection with the University. (Some account of Dr. Clouston's work in the Royal Edinburgh Asylum is given in the *Journal of Mental Science* for April, 1910, on the occasion of his being presented with his portrait by colleagues and friends.)

*Glasgow Royal Asylum.*—Founded in 1810. Built by voluntary subscriptions, and opened in 1814. Rebuilt on a better site and on a more extended scale in 1842. It consists of two main buildings adjoined. The East House was designed for pauper patients, while the West House was reserved for richer private patients. For twenty years the whole establishment has been devoted to private patients, many of whom are maintained at very low rates of board, to the great advantage of the locality. On the foundation stone of the original asylum were inscribed the words: *To restore the use of reason and to alleviate suffering.* That remains the fundamental idea of the directors. Accommodation, 460 beds. Revenue from the boards paid for patients, £27,974, aided by a small endowment. On March 25th, 1908, there were 449 patients in residence. Of these, 65 paid less than £40 and 155 paid no more than £40 per annum. Extent of grounds, 66 acres. Lectures on mental diseases in connection with the University.

*Montrose Royal Asylum.*—Founded in connection with the infirmary, but with the infirmary and dispensary subsidiary to the asylum. The infirmary still benefits by this long-continued connection. Built by voluntary subscription. Opened in 1782, rebuilt in the country in 1857. The asylum consists of three main buildings: (1) The original establishment chiefly devoted to pauper patients; (2) the hospital, opened in 1891, for sick and infirm cases; (3) Carnegie House for the reception of private patients only, opened in 1899. There are also two separate villas containing patients at the lower rates. Extent of the grounds, 270 acres. Accommodation, 700 beds. The charitable area extends to the counties of Forfar and Kincardine. Income from boards paid for patients, £23,908.

*Perth Royal Asylum.*—Founded by the trustees of the late James Murray, whose name it bears. Opened in 1827. Consists of two main buildings: (1) The original establishment enlarged in 1839 and 1889; (2) a neighbouring mansion house for quiet and convalescent patients. There are also four villas occupied by patients. Extent of grounds, 71 acres. Accommodation, 157 beds. The charitable area of the institution is limited to Perthshire. Income from boards paid for patients, £13,847.

*Dundee Royal Asylum* occupies a somewhat anomalous position at present. It was founded in connection with the infirmary, and under the same managers, in 1805. Built by voluntary subscriptions and opened in 1820. Disjoined from the infirmary and rebuilt in the country in 1882. Private and pauper patients were received until 1902, when a separate building, Gowrie House, was opened for private patients only. The later history of the institution ended in the sale of the whole property to the District Lunacy Board of Dundee. The directors derived their authority from the Royal Charter, and had entered into a contract to receive State-supported patients, as was the usual practice. The purchase price was paid to the directors, who administer the funds so obtained in aid of the poor private insane of the locality. These patients are still maintained in Gowrie House with an accommodation of 70 beds. The charitable area of the institution includes Forfarshire and Fifeshire. Lectures on mental diseases in connection with the University.

Brief reference may be made to the principal private asylum



of Scotland, *New Saughton Hall*, which is under the direction of Sir John Batty Tuke and his son. Circumstances rendered it imperative that the old mansion house of Saughton Hall should be surrendered to the City of Edinburgh, and the private patients resident there were transferred to Mavisbank, which had been similarly occupied for many years. Additions were made, and opened in 1907. Accommodation, 90 beds. The minimum charge is £105 per annum. Sir John Batty Tuke resides at Balgreen.

*District asylums.*—These were erected subsequent to the passing of the Lunacy Act, which was the result of the Commission in 1855. It is impossible to enter upon details regarding these institutions which receive the pauper patients of the country, and which have been enlarged and multiplied in accordance with the necessities of the times. The list of them given on p. 616 shows their distribution and importance.

It will be of some interest, however, to indicate certain changes which have been evolved, in recognition of important principles. For instance, take the *Inverness District Asylum*, which was erected in the early years of modern administration, on a limited area of estate. It was, like the others, an asylum built on the corridor plan, of the cheapest construction, and in no way in advance of the times. Under the active management of Dr. Keay it was completely re-organised and modernised. Hospitals were built, administrative buildings were added, and the estate was enlarged at a cost of some £70,000. Thus the most remote asylum will bear comparison with any of its class. Similarly the *Ayr District Asylum* has been enlarged and rendered more effective by the addition of a separate hospital, which cost only about £100 a bed. On the other hand, the enlargement of the *Perth District Asylum* was accomplished by the erection of separate villas, the acute cases being treated in the main buildings. The *Stirling District Asylum* had large demands made upon it, and a block for chronic patients was first added, then a detached hospital for acute cases, and lastly, a separate house for the nursing staff.

This represents a remarkable latitude of administration, and brings us to consideration of the reasons which permitted such diversity of action. The reasons are not far to seek. As has been said, the Lunacy Act was the work of men of wisdom and

prescience, and the central administration has been maintained on the lines they laid down. A brief discussion of this matter will be of interest.

This board consists of a chairman, two paid medical commissioners, two unpaid lawyers of eminence, and a paid secretary. The chairman, who is also unpaid, has always been a man of public distinction. The deputy-commissioners, two in number, are medical men paid to visit and report upon the boarded-out cases. (Sir Arthur Mitchell began his official career as deputy-commissioner, and some account of his life and work is given in the *Journal of Mental Science* for April, 1910.) Scotland is a small country, and the medical commissioners are not harassed by the volume of work expected of them. They know the asylums intimately, and the patients whose cases are of outstanding importance just as well. They have always encouraged local administration to develop, to experiment, to succeed. This is so fully recognised and appreciated that the Scottish Division of the Medico-Psychological Association entered the following minute in their proceedings of March 19th, 1908: "In view of the fact that it is now fifty years since the Act 20 and 21 Victoria, Chapter 71, came into operation, the Scottish Division of the Medico-Psychological Association resolve to record in their minutes this expression of their recognition of the great advances which have been made in Scotland during the last half century in the treatment of the insane and the scientific investigation of insanity; their acknowledgment of the humane, enlightened, and generous manner in which the asylum boards of the country have provided for this most unhappy class of the community, and their high appreciation of the broad and sympathetic policy consistently pursued by the Commissioners of the General Board of Lunacy in their control of Scottish lunacy administration, a policy which has not only been fruitful in the protection and promotion of the best interests of the insane, but has also done much to encourage and assist those who are more immediately engaged in carrying out their care and treatment."

Eras have been marked firstly by the enlargement of liberty and the avoidance of irksome restrictions, and secondly by a fuller development of medical ideas in psychiatry. Hopeless of attaining a true pathology of insanity, and sceptical of professional powers in the early Victorian age, there was a robust

demand for common-sense methods in administration. Greater liberty was the prime necessity. Mechanical restraint and seclusion had been discredited, personal comfort had been ignored. The house had to be set in order. It is true that Dr. Lauder Lindsay had been on the track of pathological conditions of the blood in mental disorders, but his apparatus was imperfect and his conclusions were faulty. The time had not come. Therefore, administration was largely operative in more accessible fields of action.

Liberty and industry were obviously remedial in intention and practice. Sir John Sibbald assumed direction of the Argyll District Asylum and abolished airing courts with their unnecessary walls and limited area. Sir John Tuke abolished the use of locked doors when in command of the Fife District Asylum. Dr. Rutherford, greatly daring, trusted patients of the most doubtful antecedents with unprecedented freedom, and sent them to work in the open air using the ordinary tools of agriculture. He did more than anyone to abolish restraints, to foster industry, and to accustom Scotland to spend money freely in the care and treatment of the insane.

It became evident that asylums required land on which to employ suitable patients. Seventy years ago the directors of the Perth Royal Asylum embarked on that venture, and sixty years ago they acquired a succursal house standing in its own grounds. But the district asylums soon developed the agricultural ambition, and attained success in the undertaking.

Personally, I do not advocate exclusive use of unlocked doors; it seems to me that liberty may be more truly gauged by the number of patients on parole, but it is certain that the fewer the number of locked doors the better. There are patients so dangerous, so regardless of consequences, that certain avenues must be closed in justice to the patients themselves. Yet one may walk from one end of the hospital at Bangour to another, through male and female divisions, without requiring a key or a nurse to show the way.

While these changes were in progress, Dr. Clouston raised questions from the point of view of the physician. He pleaded for the infusion of the *medical spirit* into our administration, he advocated the teaching of psychiatry to the students of our universities, he raised the question of the scientific training of our nurses. The medical spirit led to a new development.

Dr. Clouston adapted the old separate wards of the Royal Edinburgh Asylum so that they might be used as hospitals. New hospital wings were designed and built at the Perth Royal Asylum, and the first separate hospital was added to the resources of the Montrose Royal Asylum. It became a necessity for the asylums to separate and treat acute cases in this way. Hospitals are to be found at Edinburgh, Dumfries, Ayr, Glasgow, Fife, Stirling, Montrose, Aberdeen, and Inverness. But these were designed for the treatment of mental diseases, and since that time sanatoria have been found essential for the reception of tubercular patients. The first erected were at the Perth Royal Asylum, and since then they have been introduced at Edinburgh, Dumfries, and Glasgow. At the Glasgow District Asylum, Gartloch, a sanatorium of sixty beds was regarded as essential, but the result has been that the number of tubercular patients has so diminished that it is now too large by about forty beds.

Years ago at Ville Juif these patients were placed in sheltered, open-air verandahs, and American experience proved that many chronic forms of insanity could be treated with advantage in the open air. Consequently at the Ayr District Asylum and at Bangour village, and at Glasgow, many patients of an acute as well as a chronic type are treated in verandahs on this principle.

The Glasgow District Asylum at Lenzie, under Dr. Hamilton Marr's direction, affords a good example of modern detached additions to the earlier type—a reception house, a hospital, a house for idiots, a pathological laboratory of a complete organised design.

Recalling the original inception of such royal asylums as Aberdeen, Glasgow, and Montrose in connection with the neighbouring general hospitals, it is somewhat surprising that the modern return to this ideal was so long delayed.

This brings us back to the district asylums in their latest development. Aberdeen and Edinburgh embarked on the newest methods of architecture. These village asylums are designed on the principle of Alt-Scherbitz, and permit of classification, and its concomitant personal comfort, in a manner impossible in crowded barracks.

*Medical teaching.*—The medical teaching of psychiatry was systematised by the Medico-Psychological Association, and



the University lectures in Scotland encouraged many young doctors to enter for the certificate of the Association. Later it became an integral part of medical education, and at the present time we have reason to believe that the universities will grant a special degree in this subject, such a degree as the Diploma of Public Health without which no State appointment can now be held.

The instruction of attendants and nurses has vastly increased in scope and importance since the early tentative efforts which produced a handbook on the subject at Perth, written by four Scottish asylum superintendents, and approved by the Scottish Division of the Medico-Psychological Association. The Association heartily approved of these modest beginnings and formulated a scheme which has resulted in the training and certification of some 9000 nurses. This success has been followed by a general movement for the certification of all properly trained nurses under legislative authority, and it is probable that we shall not have to wait long before it is in full working order. The handbook has grown to an important volume, now in its thirty-third thousand, and under successive revisions it has taken an assured place in the specialty.

Important changes have occurred in the *personnel* of the nursing staff. Dr. Turnbull, in 1895, introduced female nurses into the hospital for male patients at the Fife District Asylum. The first Lunacy Commissioners had indicated the desirability of such a step, and experience in the Copenhagen Hospital had shown how it could be adopted. The system gained ground, and the general improvement in nursing was accompanied by a notable strengthening of the night staff. Once more the principles originally laid down by the Commissioners were adopted and developed in detail.

Last year saw one of our wrongs righted—an Act passed granting assured pensions on a contributory basis to asylum workers throughout the Kingdom. It applies to all institutions directly supported by rates, and confirms as a right to English and Irish staffs what had been merely permissive. Scotland had no such permissive provision for those who had served long and well.

*Laboratories.*—The last great undertaking which Dr. Clouston initiated and still supports with unabated skill and energy is the establishment and maintenance of the joint asylums' laboratory under the direction of Dr. Ford Robertson. It dates

from 1896, when it was opened in Edinburgh, having commanded general and willing help. The advantage of having a central, accessible laboratory from which reports on special cases could be obtained, and skilled aid rendered available, was undoubted, and the work advanced from the examination of dead tissues to its natural sequel, the investigation of living processes. Last year, however, a feeling arose that the laboratory was unduly limited in scope, and new arrangements came into force. It will be understood that there are four universities of ancient foundation in Scotland—Edinburgh, Glasgow, Aberdeen, and St. Andrews. The last-named has extended to Dundee in science. As there are many students of medicine, especially in Edinburgh and Glasgow, the representatives of the west came to the conclusion that the clinical material and the students in their locality required an alteration in the existing state of matters. The asylums of Glasgow and the neighbourhood (nine) therefore united to institute another laboratory under the direction of Dr. Ivy Mackenzie, with the name of the "Western Asylums Research Institute" which is in the centre of some 4,000 patients in the Glasgow area. The same principles guide the founders as obtain in Edinburgh. It is to carry on researches into the causation and cure of insanity, to guide the assistant medical officers of the associated asylums in their work, to afford post-graduate facilities.

Yet another psychiatric laboratory is in process of institution. The directors of the Dumfries Royal Asylum, with Dr. Easterbrook, are visiting the laboratories of the Continent of Europe in order to perfect the arrangements which are being made at Dumfries.

And, lastly, the Dundee Royal Asylum Directors, who never contributed to the Joint Laboratory, have agreed to defray the cost of patients suffering from incipient insanity in the Dundee Royal Infirmary, having obtained the co-operation of the College Laboratories. This resembles the ancient connection between the asylum and the hospital, which has already been noted, and it should be added that a similar arrangement is likely to be made in Edinburgh. We have long laboured under the disadvantage of being scattered workers, out of touch with the great schools of medicine, and have long endeavoured to resume that co-operative and helpful association. Neurology and psychiatry should know no divorce.

The early treatment of mental diseases is an important factor in our duty towards the State, and this brief mention of Dr. Carswell and his great work in Glasgow is imperative. Glasgow is a great city, equipped with hospitals and various agencies for dealing with the failures of civilisation, disease and disaster. The Inspector of Poor reports about a thousand cases of suspected insanity to Dr. Carswell yearly. He examines them and deals with them in a similar manner to that which has long been adopted in Paris. Those manifestly in need of asylum care are sent to the appropriate institution, but there are many requiring observation and treatment who need not be so dealt with. In the city hospitals wards have been set apart for these cases of incipient and transient insanity under the care of Dr. Carswell. This method has now long been in use, and the results have been successful beyond anticipation. It would require a lengthy discussion to make all this plain, even to set forth the statistical results. Suffice it to say that the Glasgow system is well suited to the needs of a great urban population.

(<sup>1</sup>) A paper read at the Annual Meeting held in Edinburgh in July, 1910.—

(<sup>2</sup>) At the time of writing there is now only one parochial asylum in existence—Greenock.

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*The Deviation of Complement in the Mental Diseases Known as Mania.* By LEWIS C. BRUCE, M.D.,  
Medical Superintendent, District Asylum, Murthly.

ONE of the most obvious impediments to the advance of our knowledge of mental diseases is the lack of a physical basis of classification. This deficiency is constantly presenting itself, and even in such a comparatively simple disease as mania one is often in doubt as to whether the diagnosis should be manic-depressive insanity or confusional mania.

Some two years ago it occurred to me that it might be possible to apply the Bordet-Gengou reaction to assist in the diagnosis of maniacal conditions.<sup>1</sup> My first series of observations were carried out with the streptococcal organisms, which I had isolated from cases of mania. Broth cultures of these organisms, with similar cultures of *Staphylococcus aureus* and *Bacillus coli communis* which were used to act as controls, were

taken as the antigen or toxin; the serum of the patient inactivated by heat was expected to contain the specific anti-body, while the complement was supplied by the fresh serum of a rabbit or guinea-pig. Inactivated hæmolytic serum together with .5 c.c. of a 5 *per cent.* suspension of the appropriate red blood-corpuscles was used as the indicator. If the serum of the patient in the presence of the toxin or antigen, supplied by the broth cultures of the organisms, entered into union with the complement supplied by the rabbit serum, then upon adding 5 c.c. of a suspension of red blood-corpuscles plus one dose of hæmolytic serum, no hæmolysis would occur, *i.e.*, the complement had been deviated. If, on the other hand, the serum of the patient did not enter into combination with the complement in the presence of the antigen, then upon the addition of the indicator, the red blood-corpuscles and the hæmolytic serum, hæmolysis would take place.

This first series of observations, although interesting, were not uniform in the results obtained.

The next combination which I tried was as follows: I argued that if these maniacal conditions were due to toxins circulating in the blood, that these toxins must be excreted by some channel, the most probable channel being the urine. I therefore now used the urine as the antigen, the serum of a rabbit immunised to the before-mentioned streptococci as the immune serum, while the complement was supplied as before by the fresh serum of a rabbit or guinea-pig. In this series of observations negative results were obtained both with the urine of maniacal persons and of control persons.

I still thought, however, that the urine was a probable channel of excretion of toxins, and it occurred to me that in acutely maniacal conditions the blood should also contain an appreciable amount of toxin. I therefore immunised a rabbit with the serum taken from a case of acute mania. From 8 to 10 c.c. of serum was injected into the rabbit at intervals of ten days. This injection was repeated three times, and ten days after the last injection the rabbit was bled and the serum so obtained was inactivated by heat. The observations made with this serum were conducted upon the same lines as the previous ones. The urines of maniacal patients and control persons were used as the antigens, the serum of the rabbit immunised to the serum of the maniacal



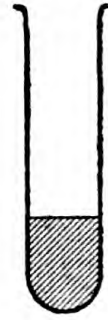
To serum of case  
of mania (class  
undetermined).

C. '02 c.c.

'04 c.c.

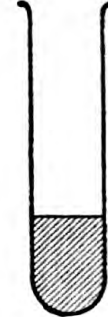
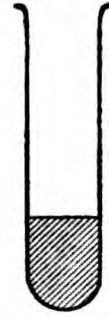
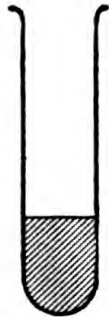
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Control 1.



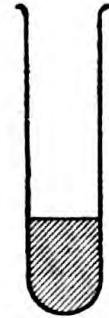
No deviation  
of  
complement.

Control 2.



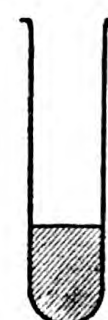
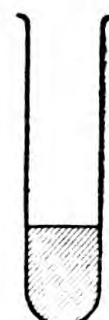
No deviation  
of  
complement.

Control 3.



No deviation  
of  
complement.

Control 4.



Deviation of  
complement  
up to '02 c.c.

To serum of case  
of mania (class  
undetermined).

C. '02 c.c.

'04 c.c.

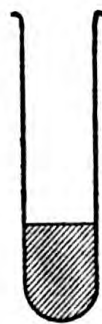
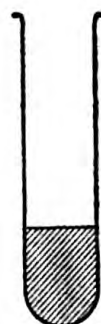
'08 c.c.

Epileptic.



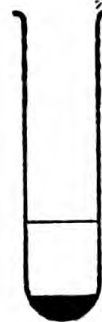
No deviation  
of  
complement.

Melancholia.



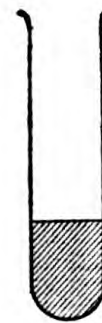
No deviation  
of  
complement.

Confusional.



Complete  
deviation of  
complement.

Mania.



No deviation  
of  
complement.

To serum of case  
of mania (class  
undetermined).

C. '02 c.c.

'04 c.c.

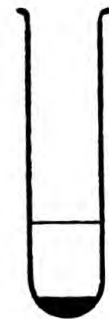
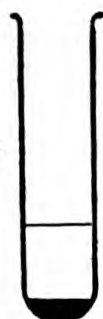
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Mania  
(confusional). 1



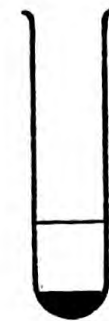
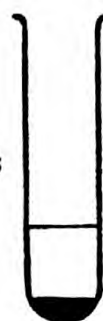
Complete  
deviation of  
complement.

Mania  
(confusional). 2



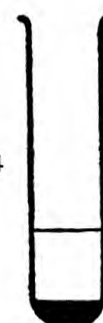
Complete  
deviation of  
complement.

Mania  
(confusional). 3



Complete  
deviation of  
complement.

Mania  
(confusional). 4



Deviation of  
complement  
up to '04 c.c.

To serum of case  
of mania (class  
undetermined).

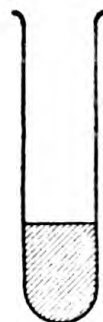
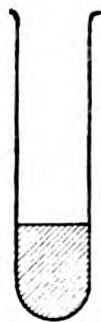
C. '02 c.c.

'04 c.c.

'08 c.c.

Manic-  
depressive.

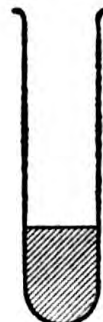
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Deviation of  
complement  
up to '02 c.c.

Manic-  
depressive.

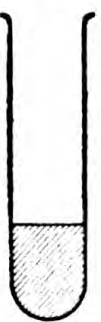
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No deviation  
of  
complement.

Manic-  
depressive.

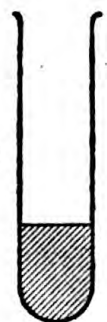
3



Deviation of  
complement  
up to '02 c.c.

Manic-  
depressive.

4



No deviation  
of  
complement.



patient as the anti-body, and the complement was supplied by a rabbit. The quantities of urine and anti-serum recommended by M. A. Bergeron in similar observations made in tubercular persons were used, and these quantities answered excellently. The results were quite definite and encouraging, and so far as the observations went, specific. For instance, the serum of a rabbit immunised to the serum of a manic-depressive case when mixed with the urine of a similar case deviated complement, but when mixed with the urine of confusional cases, melancholics, and control persons, did not deviate complement.

If there are specific toxins in the blood of maniacal patients, as would appear to be indicated by the results of these latter observations, I thought it probable that antitoxins would also be present. I therefore repeated these experiments, using the serum of maniacal patients as the anti-serum, and the results obtained were similar to those obtained with the serum of the rabbit immunised with the serum of cases of mania.

As an example of the results obtained I show four charts. The serum used was that of a maniacal female, and I was in doubt as to whether she should be classified as a case of confusional mania or a case of manic-depressive excitement. The serum of this patient was tested, in the manner which is described at the end of this paper, against the urines of four control persons, one melancholic, one epileptic, one case of confusional insanity, one case of undiagnosed mania, four cases of confusional mania and four cases of manic-depressive excitement. Of the four controls, one deviated .02 c.c. of complement; the rest gave negative results. The epileptic, the melancholic, and the undiagnosed case of mania all gave negative results, but the confusional case deviated complement up to .08 c.c. The four cases of confusional mania all deviated complement with the exception of No. 4, which deviated up to .04 c.c. Of the four manic-depressive cases two deviated .02 c.c. of complement, but otherwise the results were uniformly negative. These results would place the patient whose serum was tested as a case of confusional mania.

The number of cases to which I have applied this test are limited as the material at my command is limited, but I record the results, such as they are, in the hope that others will extend these observations not only in cases of mania but also in such conditions as dementia præcox.

*Technique.*—The materials required are: (1) The blood-serum from a patient inactivated by heat. (2) The urine of similar patients as well as the urine of control persons and of patients suffering from other forms of insanity. The urines are collected in  $\frac{1}{4}$ -litre flasks heated to 80° C. to precipitate albumen and then passed through a Berkfield filter. (3) A sufficient quantity of serum obtained from a rabbit or guinea-pig to act as complement. This serum must not be more than twenty-four hours old. (4) A hæmolytic serum with a 5 *per cent.* suspension of washed red blood-corpuscles to be used as an indicator. Before each observation the complement must be tested with the hæmolytic serum and red blood-corpuscle suspension so as to estimate the dose of complement required to hæmolyse .5 c.c. of the 5 *per cent.* suspension of red blood-corpuscles. Urine which has been boiled may lose its power of deviating complement. Urine which has stood for any length of time may lose its power of deviating complement. Urine which contains a trace of albumen will deviate complement without the intervention of an immune serum. Samples of urine taken from the same patient on different days may vary considerably in their power of deviating complement.

*Method of Application of the Test.*

Tube	1. Urine of mania	. . . '2 c.c. + normal saline	. '3 c.c. + C. '02 c.c.
"	2. " "	. . . '2 " + "	. '3 " + C. '04 "
"	3. " "	. . . '2 " + "	. '3 " + C. '08 "
"	4. Serum of mania	. . . '3 " + "	. '2 " + C. '02 "
"	5. " "	. . . '3 " + "	. '2 " + C. '04 "
"	6. " "	. . . '3 " + "	. '2 " + C. '08 "
"	7. Urine manic-depressive.	. '2 " + serum of mania	. '3 " + C. '02 "
"	8. " "	. '2 " + "	. '3 " + C. '04 "
"	9. " "	. '2 " + "	. '3 " + C. '08 "
"	10. Urine confusional mania	. '2 " + "	. '3 " + C. '02 "
"	11. " "	. '2 " + "	. '3 " + C. '04 "
"	12. " "	. '2 " + "	. '3 " + C. '08 "
"	13. Urine control	. . . '2 " + "	. '3 " + C. '02 "
"	14. " "	. . . '2 " + "	. '3 " + C. '04 "
"	15. " "	. . . '2 " + "	. '3 " + C. '08 "

These tubes are then placed in the incubator at 37° C. for ninety minutes, and then to each tube is added .5 c.c. of the suspension of red blood-corpuscles together with a sufficient dose of hæmolytic serum to hæmolyse the red blood-corpuscles with .01 c.c. of complement. The tubes are then returned to

the incubator for one hour, allowed to stand at room temperature overnight and the results recorded.

*Cases tested to serum of confusional mania.*

*Tested to serum manic-depressive.*

Control.	C.	'02 c.c.	'04 c.c.	'08 c.c.	'02 c.c.	'04 c.c.	'08 c.c.	
1	.	N	.	N	.	N	.	N
2	.	N	.	N	.	—	.	—
3	.	P	.	N	.	P	.	N
4	.	N	.	N	.	N	.	N
5	.	P	.	N	.	N	.	N
6	.	N	.	N	.	P	.	N
7	.	N	.	N	.	—	.	—
8	.	P	.	N	.	—	.	—
9	.	N	.	N	.	—	.	—
10	.	P	.	N	.	—	.	—
11	.	N	.	N	.	—	.	—
Mania (confusional).								
1	.	N	.	N	.	N	.	N
2	.	P	.	P	.	N	.	N
3	.	P	.	P	.	P	.	N
4	.	P	.	P	.	—	.	—
5	.	P	.	P	.	N	.	N
6	.	N	.	N	.	N	.	N
7	.	P	.	P	.	—	.	—

It will be noted that Cases 1 and 6 failed to deviate complement with either serum. Both these cases were tested several times and the same results were obtained. Is it possible that there are other varieties of mania besides confusional and manic-depressive?

*Cases tested to serum confusional mania.*

*Tested to serum manic-depressive.*

Mania (manic-depressive).	C.	'02 c.c.	'04 c.c.	'08 c.c.	'02 c.c.	'04 c.c.	'08 c.c.	
1	.	P	.	N	.	P	.	P
2	.	P	.	N	.	P	.	P
3	.	N	.	N	.	P	.	P
4	.	N	.	N	.	P	.	P
5	.	N	.	N	.	P	.	P
6	.	N	.	N	.	P	.	P

<i>Cases tested to serum confusional mania.</i>						<i>Tested to serum manic-depressive.</i>					
Melancholia.	C.	'02 c.c.	'04 c.c.	'08 c.c.		'02 c.c.	'04 c.c.	'08 c.c.			
I	.	N	.	N	.	N	.	N	.	N	
<i>Confusional insanity.</i>											
I	.	P	.	P	.	—	.	—	.	—	
<i>Epileptic.</i>											
I	.	N	.	N	.	N	.	N	.	N	
2	.	N	.	N	.	N	.	N	.	N	
3	.	N	.	N	.	N	.	N	.	N	
<i>General paralysis.</i>											
I	.	P	.	P	.	—	.	—	.	—	
2	.	N	.	N	.	—	.	—	.	—	

The general paralytic No. 1 was at the time in a state of acute mania.

#### DISCUSSION,

At the Annual Meeting held in Edinburgh, July, 1910.

Dr. McKENZIE said it was a difficult matter to discuss the paper, and he would not criticise work which he had not repeated himself. He thought the results which Dr. Bruce had found were very interesting and suggestive. There was only one series of the author's observations which he, Dr. McKenzie, thought he could explain, namely, the third series. In that series, where he injected the serum first into a rabbit, and used that rabbit's serum with the urine of the various patients, he would get a deviation of complement in every case where the urine of the patients contained albumen. With regard to the fourth series, he did not think the albumen itself would be a very disturbing factor as regards destruction of complement. He knew that Wilson examined 200 cases, finding the presence of albumen by that method where it was impossible to find it by the ordinary delicate tests. He did not find albumen so long as it was pure and had any effect on the complement. He wished to suggest to Dr. Bruce that in confusional cases, or in cases with a temperature, there was a large amount of other nitrogenous substance, de-naturalised albumens, amido-acids; and those, if in a sufficiently concentrated condition, would have a deleterious effect on the complements and give rise to the appearances which Dr. Bruce explained.

Dr. MERCIER said he wished to look at the matter more broadly than from the standpoint of technique. Were members to understand that when the complement was deviated in the manner explained, that that indicated that in the blood of the person there existed the same toxin as was present in the original preparation to which the blood was added. If it did not show that the same toxin existed in this person's blood, what was the use of it? He would doubt very much, on *à priori* grounds, whether a particular toxin necessarily produced in each person the same symptoms.

Dr. LEWIS BRUCE, in reply, said one had to be certain that there were none of the disturbing factors, and that constituted the difficulty in the observation. He contended that if one had the same toxin in the urine and the anti-body in the serum, one would get a deviation of complement, and it promised to be a most valuable method of diagnosis, in the same way as was the Wassermann test. At present the difficulties of the observation were such that he had asked others to repeat them.



*The Infective Foci in General Paralysis and Tabes Dorsalis.* By W. FORD ROBERTSON, M.D., Pathologist to the Scottish Asylums.

IN previous papers it has been contended by Dr. Douglas McRae, Dr. Dods Brown and myself, that in cases of general paralysis there are special bacterial infective foci in the nasopharyngeal and buccal mucous membranes, and that these infective foci are of importance in the pathogenesis of the disease; Dr. McRae and I have also maintained that in cases of tabes dorsalis there are similar infective foci in the genito-urinary tract. In this paper I wish to deal with some further investigations, the results of which give additional support to these views. In the fifteen minutes at my disposal it is impossible for me to describe these investigations in detail. I can only indicate their chief results and state some of the conclusions that they seem to me to warrant. All the evidence that I can lay before the meeting is shown under the ten microscopes on the tables.

In my experience it is possible, in all cases of advancing general paralysis, to demonstrate, in direct films of the nasal secretion, large numbers of small granular bacilli which frequently show metachromatic granules. In most cases such bacilli are present in very large numbers. In cultures made upon the ordinary media these micro-organisms often fail to grow. I have lately used an agar medium over which there have been poured some drops of sheep's serum containing hæmoglobin in solution. In all of sixteen cases of general paralysis recently examined with the aid of this hæmoglobin medium, I have obtained from the nasal mucosa abundant growths of a diphtheroid bacillus showing the morphological characters and bio-chemical reactions, either of the *Bacillus paralyticans longus* or of the *Bacillus paralyticans brevis*. In four out of six of these cases in which it was possible to test the virulence, the bacillus proved virulent to mice. I have endeavoured to get further information regarding this infection from histological examination of the nasal mucosa and subjacent tissues in a series of cases of general paralysis and in various controls. The following are, in brief, the conclusions that I have been able to draw from this examination. The nasal mucosa and subjacent tissues of the general paralytic are

constantly the seat of well-marked diffuse sclerotic changes and of localised acute or subacute inflammatory processes. In the cases in which these active morbid processes are going on, there is more or less dense aggregation of lymphocytes and great increase in the number of plasma-cells. Lying amongst the epithelial cells covering such areas a few diphtheroid bacilli may generally be detected. Occasionally small areas of epithelium may be observed in which these bacilli occur in dense masses; in these instances they can be seen to be pushing their way through the thickened basement membrane and invading the subjacent tissues. Small microscopic ulcers may occasionally be detected; their floor generally shows necrotic tissue, lying in which there are numerous diphtheroid bacilli. In the lymphatic channels there may frequently be seen more or less numerous bacilli of a similar kind. In this situation there are also, in some areas, very abundant and conspicuous aggregations of granules the size of micrococci, larger or smaller angular fragments, and short rods which stain of a deep blue or olive-green tint in preparations stained with Loeffler's methylene-blue. These bodies are either contained within the cytoplasm of endothelial cells or lying free in the tissue spaces. I shall refer to them again. All control cases show, in methylene-blue preparations, some plasma-cells, more or less numerous mast-cells, and generally a few aggregations of olive-green granules. None have shown invading diphtheroid bacilli.

In several cases of general paralysis diphtheroid bacilli have been found in considerable numbers lying in the lymphatics of the connective-tissue sheath of the second division of the fifth nerve as it passes through the foramen rotundum. Examination of the third division in the foramen ovale has so far given negative results, but the Gasserian ganglion and neighbouring dural tissues have in nearly all of the cases been observed to contain some of these bacilli. In several cases the dura mater lying over the cribriform plate of the ethmoid and the under aspect of the olfactory bulbs have been found to contain numerous diphtheroid bacilli. Experiments in the *post-mortem* room have shown that fluids readily pass from the nasal sub-mucosa through the cribriform plate of the ethmoid. It is therefore evident that bacilli that have reached the lymphatics of the nasal mucous membrane can, and do, pass into the cranial lymphatic system by way of the cribriform plate of the

ethmoid and foramen rotundum. There are also other possible channels of cranial invasion from the naso-pharyngeal tissues.

In order if possible to trace the infection further I have, in a series of cases of general paralysis, examined the pia-arachnoid in horizontal sections stained with Loeffler's methylene-blue. In the majority of cases bacilli with the characteristic morphological features have been clearly demonstrated, generally in small numbers, but occasionally in abundance. In all cases of general paralysis the pia-arachnoid appears to contain, though it may be only locally, very numerous aggregations of the blue and olive-green granules and fragments already described as occurring in the nasal mucosa. These bodies, in so far as they have been observed, have probably generally been regarded as "tissue granules," the result of degenerative and disintegrative processes. In favour of this opinion there are the facts that a few granular aggregations of a similar appearance may be seen in control cases, and that in these they can often be clearly traced from the granules of mast-cells. Against it there are, however, other facts that deserve consideration. In cases of general paralysis these aggregations commonly occur, locally at least, in the nasal tissues and in the pia in very extraordinary amount; many of the rod-shaped forms have appearances identical with those presented by the alleged pathogenic bacilli grown under anaërobic conditions. It has been proved in the laboratory that these bacilli are capable of living under anaërobic conditions, and that under such conditions their growth is extremely slow. Growing out from some of the granular masses characteristic rod-forms with clubbed extremities have been detected. Moreover, it has been shown experimentally that these bacilli when injected into the tissues of the rabbit are taken up by the endothelial cells and transformed into granular aggregations very closely resembling those in question. We cannot, therefore, exclude the possibility that some of these masses represent altered diphtheroid bacilli, and even a chronic infection by these micro-organisms growing under semi-anaërobic conditions. As the question cannot be settled by the staining methods I have employed, I leave it there for the present. It remains to add that within the brain of the paralytic diphtheroid bacilli can, in my experience, be demonstrated in the majority of cases. In several instances I have found them to occur locally in large numbers.

The evidence in support of the view that tabes dorsalis is associated with a special infective focus in the genito-urinary tract is chiefly bacteriological and therapeutic. In twenty-three successive cases of tabes I have obtained from the urine or from the surface of the urethra cultures of a diphtheroid organism with the bio-chemical reactions of one or other of the two types to which importance has been attached. In several instances this bacillus has proved virulent to mice. In every case there have been other or secondary infections, represented most commonly by various Gram-fast diplococci, but also frequently by the *Bacillus coli*. In three cases of tabo-paralysis the bacilli have been traced through the pelvic lymphatics to the posterior root ganglia and the pia-arachnoid of the lumbo-sacral cord, In the connective tissues around the posterior root ganglia and in some areas of the membranes of the cord there were found very numerous, more or less dense, aggregations of blue granules and rods similar to those observed in the nasal tissues and cerebral pia-arachnoid in cases of general paralysis. The therapeutic evidence has consisted in the results obtained from the administration of autogenous vaccines and anti-serum in a fairly extensive series of cases. It shows that in early cases of tabes the symptoms readily yield to such specific treatment. In advanced cases it is much more difficult to obtain amelioration of the patient's condition, yet even in some of these pain has been relieved, walking has greatly improved, and urinary troubles have been obviated. It is impossible that such results could have been obtained if the infections against which the treatment was directed had nothing to do with the malady. It has, moreover, frequently been observed that an overdose of one of these autogenous vaccines is followed within twelve or twenty-four hours by a characteristic attack of tabetic pains.

Before concluding I desire to say a few words regarding the origin of these infective foci. In my opinion sufficient evidence has now accumulated to show that general paralysis is, as a rule, a venereal disease, not only in respect of its common ætiological relationship to previous syphilis, but also in respect to the source of the bacterial infection which experimental evidence has shown to be capable of producing many of the essential phenomena of the disease. The source of this infection is commonly a bacillary endometritis. The man gets a urethral infection usually before marriage; he accidentally



infects his nasal mucosa and invasion of the local lymphatics begins. He may, however, convey the infection to his wife; her uterus provides a suitable anaërobic culture medium. The virulence of the organism gradually rises, and in this more virulent form the bacillus is returned to the husband. Every asylum physician is aware of the fact that if he allows a man who suffers from general paralysis, and who has improved under asylum treatment, to go home, the rule is that the patient is brought back within six weeks suffering from a serious relapse. What has happened? In some instances, at least, he has become re-infected by a virulent strain of the bacillus. I have made great efforts to have some of these "carriers" investigated bacteriologically. Thanks to the kindness of two gynæcologists I have succeeded in two cases. The first case was that of a lady whose health was greatly undermined by severe endometritis. Cultures were made for me by Dr. Haultain from the interior of the uterus, and portions of the endometrium were also obtained. There developed in the cultures numerous colonies of a *Bacillus paralyticans longus*, identical with that previously obtained from the urethra and nose of the patient's husband, and sections of the endometrium showed the bacilli in the tissues. The patient consented to undergo vaccine treatment, and in preparing the vaccines I used the bacillus isolated from the husband. Each ordinary dose produced next day a definite reaction in the form of a severe and characteristic attack of endometritic pain. Subsequently this was obviated by the administration of anti-serum.

The second case was that of the wife of another general paralytic, whose nasal cavities and urethra were loaded with a virulent strain of the *Bacillus paralyticans brevis*. In this case the uterine lesion was so severe that the specialist feared at first that the patient was suffering from carcinoma. Direct films made from a scraping from the interior of the uterus showed abundant diphtheroid bacilli, with metachromatic granules. Cultures upon hæmoglobin agar yielded growths of the same organism as that previously obtained from the husband. I tested in the usual way the virulence of three separate growths. Out of six mice two died within twenty-four hours, two within five days, one within eleven days, and the last succumbed after two months.

It is clearly established, from certain features of the disease

when it occurs in early life, that syphilis specially tends to damage the nasal tissues. These highly virulent bacilli that are associated with a particular form of endometritis may find a specially suitable nidus in a nasal mucous membrane that is weakened in its defences by a syphilitic sclerosis. It is certain, at least, that these virulent diphtheroid organisms do invade the nasal mucosa of the general paralytic, and that they pass along the lymphatics to the intra-cranial cavity, whilst experimental evidence now obtained by five observers has shown that they are a sufficient cause of the characteristic histological lesions of the disease.

The relation of the urethral infection in tabes to a bacillary endometritis is not so clear. I have no direct evidence on the subject. In cases of tabes, as has been established by extensive statistics, a history of acute urethritis occurs in over 90 *per cent.* This previous acute infection is probably a far more important step in the pathogenesis of locomotor ataxia than is at present believed. It permits of various secondary urethral infections becoming established, and among others those by the neurotoxic diphtheroid bacilli. Such bacillary infection of the urethra may undoubtedly exist without tabes, but if the patient has had syphilis and has suffered from a slight syphilitic spinal meningitis he may be much more susceptible than others to the action of the toxins carried to the spinal canal by the pelvic lymphatics. He may also be less able to inhibit the multiplication of living bacilli that reach the lymph-stream. There is, however, no proof that syphilis is a constant antecedent of tabes. Many of the characteristic phenomena of the disease can certainly be produced in lower animals by the action of these neurotoxic bacilli alone.

I have to express my special indebtedness to Dr. Keay and to Dr. Muncaster, Pathologist at Bangour Asylum, for having given me facilities for obtaining nasal tissues, and my similar obligations to Dr. Muirhead, Dr. David Orr, and Dr. A. L. Taylor. I am also indebted to Dr. M. C. W. Young for valuable help in the histological work.

#### REFERENCES.

- Rev. of Neurol. and Psych.*, February, March, and April, 1906.  
*Journal of Mental Science*, January, 1909.

## DISCUSSION,

At the Annual Meeting held in Edinburgh in July, 1910.

The PRESIDENT thanked Dr. Ford Robertson for his paper.

Dr. ROBERT JONES asked whether the bacilli had been found in the cerebro-spinal fluid. He understood Dr. Robertson to say the bacilli were found in the brain in many cases of general paralysis. He supposed that did not apply to all cases.

Dr. IVY MACKENZIE asked whether the micro-organisms were injected subcutaneously.

Dr. PERCY SMITH said he would like to make a remark from a clinical point of view. He spoke because he had seen one of the cases referred to by Dr. Ford Robertson, a general paralytic, whose wife had endometritis, and in the secretion therefrom the *Bacillus paralyticus* was said to have been found. He had been treated with vaccines in Edinburgh, and returned to London in January last, when he was considered to be quite well; at any rate he had a remission. In February he had retention of urine, unequal pupils, which did not react to light, exaggerated knee-jerks, hesitation of speech, confusion of mind. It seemed evident it was the third stage of general paralysis. After returning home from Scotland Dr. Smith believed he had been treated by his own practitioner with vaccines which Dr. Ford Robertson supplied. Dr. Robertson appeared to have been asked about the case when the symptoms recurred, and he expressed the opinion that there must have been a reinfection of the patient, either from his wife, or from some other woman. But it was ascertained, as a positive fact, that the patient had had no intercourse of the kind. He feared that, from the clinical point of view, he must regard it as merely a remission of symptoms, and that, in spite of the vaccine treatment, the disease had followed its ordinary course. From his standpoint, the vaccine seemed not to have done any good in that case. He was very sceptical about the relationship of the *Bacillus paralyticus longus* found in the endometritis secretion to the disease.

Dr. WINIFRED MUIRHEAD remarked that Dr. Ford Robertson had said he was able to get tabetic symptoms in rabbits by inoculating those rabbits with the diphtheroid organism. She had produced similar symptoms in rabbits after inoculating them with ordinary *Bacillus coli* culture, or the streptococcus. The inoculations were done into the spinal canal, and there was a lesion of the spinal cord from the various inoculations. She had used both the *Bacillus coli* and the streptococcus, and her results from those were much more marked than with the diphtheroid organism, using two or three different strains of the latter.

Dr. ROBERTSON, in reply to Dr. Jones, said that Dr. McRae, Dr. Dods Brown, and he, had obtained cultures from the cerebro-spinal fluid of the living general paralytic in several cases, as had been recorded in their published papers; and Dr. John D. O'Brien had obtained growths in 70 per cent. of cases in a series extending to over 160. He did not agree with the statement of Dr. Percy Smith; the patient had left him in good health, with no evidence of active disease. What happened afterwards he did not fully know, but he had information that strongly supported the view that the patient did go back to the original source of infection. He would not, however, follow Dr. Percy Smith in expressing his absolute conviction upon a point that could only be one of conjecture. In reply to Dr. Mackenzie, he said that the virulence test was applied in the usual way; 1 c.c. of a twenty-four to forty-eight hours' broth culture was injected subcutaneously.

*A Bacteriological Investigation into General Paralysis of the Insane.* By HENRY LIND, formerly Assistant Physician to the Department for Nervous and Mental Diseases at the Kommunehospital, Copenhagen.

THE very interesting publications by Dr. Ford Robertson and his pupils on the discovery of a bacillus as the cause of general paralysis of the insane have given rise to the following research.

This ætiological hypothesis having been adopted by one observer only (O'Brien in America), and several others not having been able to confirm it, it will be perhaps of interest that similar investigations are carried out also on the continent.

The research to be mentioned was undertaken in the Danish State Serum Institute, upon cases from the Department for Nervous and Mental Diseases at the Kommunehospital, Copenhagen, and from the Aarhus Lunatic Asylum in Jutland. The cases examined were all well-marked general paralytics, and in all of them the Wassermann reaction was positive.

Blood, cerebro-spinal fluid, scrapings from the nose and the naso-pharynx were bacteriologically examined, and in some cases the urine and scrapings from the urethra. In addition, the complement-deviation test (Bordet-Gengou) was tried. Cultures of the *Bacillus paralyticus longus* and *brevis*, kindly sent to the Institute by Dr. Ford Robertson, were used as "antigen."

The results will be stated briefly.

In 18 cases of general paralysis the blood was examined for bacilli. It was drawn aseptically from the median basilic vein, and 5 c.c. were immediately placed in 50 c.c. of a 1 per cent. glucose 1½ per cent. peptone bouillon (to which was added ½ per cent. sodium oxalate and 2 per cent. sodium tartate in order to prevent clotting), this broth having proved itself a good medium for the bacilli. Two c.c. of blood were placed in ordinary 1½ per cent. peptone bouillon and 2 c.c. in glucose peptone bouillon. The tubes were kept at 37° C., the two former under aerobic, the latter under anaërobic conditions.

In 10 of these cases (once the blood was obtained during a seizure) the tubes remained sterile. The remaining 8 showed streptococci or staphylococci. In 7 of the 18 cases the cerebro-spinal fluid was also examined, and in 15 others the



cerebro-spinal fluid only. The fluid was either directly drawn into the tubes or placed there a few hours afterwards, and then kept at 37° C., one of each under aërobic and another under anaërobic conditions.

Out of these 22 cases 10 remained sterile and 12 showed streptococci or staphylococci.

The *Bacillus paralyticans* was not obtained in any of these cases, either in cultures from the blood or from the cerebro-spinal fluid.

As to the micro-organisms obtained, it may be suggested that at least in some cases they may be due to contamination.

In 15 of the cases mentioned scrapings from the vestibule of the nose, the nasal fossæ, and the naso-pharynx were examined. In 8 cases micro-organisms showing morphological resemblance to the *Bacillus paralyticans (brevis)* were obtained, but only once a bacillus having both its morphological and bio-chemical features.

In this case the complement-deviation test was applied, a culture of the bacillus obtained being used as "antigen," but no inhibition of hæmolysis took place.

Scrapings from the urethra and cultures from the urine in six cases showed various micro-organisms, which were not the *Bacillus paralyticans*.

In all the cases above mentioned and in some others, fifty altogether, the complement-deviation test was applied. Bouillon cultures of the *Bacillus paralyticans, longus* and *brevis* were used as "antigen" in a quantity of 0.4 c.c., this having been proved not to inhibit hæmolysis in the absence of the serum to be examined.

The method was that commonly used in this Institute. Sheep erythrocytes, rabbit-immune serum and fresh guinea-pigs serum were employed. Of the immune serum two and a half times the volume necessary for total hæmolysis was used, 1 c.c. of a 5 *per cent.* suspension of washed erythrocytes and 0.1 c.c. of complement; 0.2 c.c. of the patient's serum was employed, which was inactivated by heating at 56° C. for thirty minutes.

In five out of the fifty cases a slight inhibition of hæmolysis was observed with cultures of *Bacillus paralyticans longus* as "antigen."

Thirty-four samples of the cerebro-spinal fluid of general

paralytics were tested in the same way, but no inhibition of hæmolysis occurred in any case.

In addition the complement-deviation test was tried in four cases, using an antiformin extract of the bacilli as "antigen." A positive reaction was observed in none of them.

As controls ninety cases of recent syphilis and positive Wassermann reaction were tested, cultures of the bacilli being used as "antigen." A slight deviation of the complement took place in nine cases, in seven of them only when cultures of the *Bacillus paralyticans longus* were used, in the remaining two also with cultures of the *Bacillus paralyticans brevis*. The number of positive reactions, then, is seen to be proportionally the same in these control cases as in the general paralytics.

Finally, fifty-two other cases especially of nervous and mental diseases were tested. In two cases a slight deviation of the complement was observed, namely, dementia præcox and acne in epilepsy. In the latter case a repetition of the test, however, turned out to be negative.

The specificity of the *Bacillus paralyticans* has, then, not been confirmed by this research.

Before concluding I wish to express my thanks to Dr. Thorvald Madsen, director of the Danish State Serum Institute, for his kind permission in allowing me to undertake these investigations and for his valuable advice during the research.

I have also to thank Professor Friedenreich, staff physician to the department for nervous and mental diseases at the Kommunehospitalet, Copenhagen, and Dr. Hallager, medical superintendent at the Aarhus Lunatic Asylum in Jutland, for permission to examine the cases.

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*The Wassermann Reaction in the Blood and Cerebro-Spinal Fluid, and the Examination of the Cerebro-Spinal Fluid in General Paralysis and other Forms of Insanity.* By WINIFRED MUIRHEAD, L.R.C.P. Edin., Pathologist, Royal Asylum, Edinburgh.

THE brief summary of the results stated in this paper is based upon an examination of thirty-five cases of general paralysis and seventy-seven cases of psychoses other than general paralysis.

*Wassermann Reaction.*

In the examination the original method of Wassermann was employed, and a quantitative estimation of the amount of complement deviated was ascertained, the technique used being that recommended by Mackenzie.<sup>(1)</sup> Alcoholic extract of syphilitic foetal liver and of guinea-pig liver were used as antigen, and the hæmolytic serum was that of ox-rabbit, the complement being supplied by fresh guinea-pig serum, and the blood-corpuscle suspension was made up to 5 *per cent.* in normal saline solution. In each case the blood-serum and cerebro-spinal fluid were examined.

In the cases of general paralysis the serum was positive in 76·7 *per cent.*, the cerebro-spinal fluid in 71·4 *per cent.*, and a partially positive reaction was obtained in the spinal fluid in two instances, or 5·7 *per cent.*

In the other psychoses the Wassermann reaction was negative in seventy-six cases, or 98·7 *per cent.*, and in the remaining case, where the insanity was associated with Addison's disease and who was markedly tuberculous, a partially positive reaction was obtained in both the serum and spinal fluid.

*Proteid Reaction.*

The proteid reaction of the cerebro-spinal fluid was ascertained by means of two tests, namely, Noguchi's (2) butyric acid reaction and Ernest Jones's (3) modification of Nissl-Nonne's saturated ammonium sulphate reaction. They are both precipitation reactions and demonstrate the presence of globulin. The results obtained by these two tests were identical; possibly, however, for practical purposes the ammonium sulphate method is the easier to perform.

In thirty-three cases of general paralysis this reaction was markedly positive and in the remaining two cases was partially positive. The intensity or delicacy of the proteid reaction was found to bear no relationship to the Wassermann reaction.

In the seventy-seven other cases of insanity this proteid reaction was positive in two instances only, or 2·7 *per cent.*, one of these was a case of well-marked epileptic insanity, and the other was a case of insanity associated with myxœdema. In

fourteen cases, or 18·1 *per cent.*, the reaction was partially positive. The various types of insanities and the results obtained in them have been differentiated in the following table :

*Table showing Wassermann Reaction, Proteid Reaction, and Lymphocytosis in 35 Cases of General Paralysis and in 77 Cases of other Psychoses.*

Types of insanity.	Wassermann reaction.				Proteid reaction.		Lymphocytosis.	
	No.	Blood serum.	No.	C. S. fluid.	No.	C. S. fluid.	No.	C. S. fluid.
General paralysis, 35 cases . . . . .	26	+	25	+	33	+	35	+
	0	□	2	□	2	□	0	□
	8	—	8	—	0	—	0	—
Delirious insanity, 13 cases (3 alcoholic) . . . . .	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	13	—	13	—	13	—	13	—
Acute melancholia, 9 cases . . . . .	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
	9	—	9	—	9	—	9	—
Mania, 14 cases . . . . .	...	...	...	...	...	...	...	...
	...	...	...	...	2	□	...	...
	14	—	14	—	12	—	14	—
Epileptic insanity, 9 cases . . . . .	...	...	...	...	1	+	...	...
	...	...	...	...	2	□	...	...
	9	—	9	—	6	—	9	—
Paranoia, 5 cases . . . . .	...	...	...	...	...	...	...	...
	...	...	...	...	1	□	...	...
	5	—	5	—	4	—	5	—
Dementia præcox, 13 cases . . . . .	...	...	...	...	...	...	...	...
	...	...	...	...	4	□	...	...
	13	—	13	—	9	—	13	—
Senile dementia, 7 cases . . . . .	...	...	...	...	...	...	...	...
	...	...	...	...	2	□	...	...
	7	—	7	—	5	—	7	—
Congenital imbecility, 5 cases . . . . .	...	...	...	...	...	...	...	...
	...	...	...	...	2	□	...	...
	5	—	5	—	3	—	5	—
Insanity associated with myxœdema, 1 case . . . . .	...	...	...	...	1	+	...	...
	...	...	...	...	...	...	...	...
	1	—	1	—	...	...	1	—
Insanity associated with Addison's disease, 1 case . . . . .	...	...	...	...	...	...	...	...
	...	...	...	...	1	□	...	...
	1	□	1	□	1	□	1	—

+ *Positive.*□ *Partial.*— *Negative.*

It will be seen from this table that two cases of mania, both in an excited state, three cases of well-marked epileptic insanity, one case of paranoia, four cases of marked dementia præcox,



two cases of senile dementia with arterio-sclerosis, two cases of congenital imbecility, one case each of insanity associated with myxœdema and Addison's disease respectively gave a proteid reaction more or less marked. In these patients no history of syphilis was obtained and no symptoms of syphilis, congenital or acquired, were present.

#### *Estimation of Albumen.*

The quantitative estimation of the proteid present in the spinal fluid was ascertained by Aufrecht's albumenimeter in seventeen cases of general paralysis and in forty-four cases of other psychoses. The amount was much increased in the former disease, varying between 0.1 and 0.35 *per cent.*, the average being 0.2 *per cent.*, whilst in the other psychoses the quantity only twice reached 0.1 *per cent.*; sixteen cases gave 0.025 *per cent.*, nineteen cases gave 0.05 *per cent.*, and seven cases gave 0.075 *per cent.* It was found that the quantity of albumen present in the spinal fluid did not necessarily coincide with a positive or partially positive proteid reaction.

#### *Lymphocytosis.*

The cytological examination revealed a constant increase of lymphocytes in the cerebro-spinal fluid of all cases of general paralysis, which in number bore no relationship either to the intensity of the proteid reaction or to the Wassermann reaction. A differential count of the cells was not made. In the case of other insanities an increase of lymphocytes was never found—that is, 100 *per cent.* negative—and in each case the cell count was calculated by Ernest Jones's (4) field method.

#### *Fehling's Solution.*

In the total 112 cases examined the substance reducing Fehling's solution was never absent, and its reducing power was found to vary in other insanities as well as in general paralysis, but on the whole was more diminished in this disease. An accurate quantitative estimation was not made.

#### *Conclusions.*

(1) The Wassermann reaction has been found positive in the blood-serum and spinal fluid in a large percentage of

cases of general paralysis and negative in all other cases of insanity examined, therefore its presence is a valuable addition to establish the diagnosis of general paralysis, but its absence does not negative that the case in question may be one of this disease.

(2) The proteid reaction, more or less marked, is present in all cases of general paralysis, and was obtained in sixteen out of seventy-seven cases of other psychoses, although the intensity of the reaction was much less marked. It must be concluded, therefore, that this reaction is not absolutely specific for general paralysis, and demonstrates that in other insanities chemical changes are present in the cerebro-spinal fluid.

The quantity of proteid in the spinal fluid is much increased in general paralysis compared with any other type of insanity.

(3) An increase of lymphocytes was found constantly present in general paralysis and in no other case of insanity examined; thus, according to these observations, the presence of a lymphocytosis is the most reliable sign of this disease.

(4) The substance reducing Fehling's solution, although varying in its power of reduction, was never absent in all cases of insanity examined.

#### REFERENCES.

- (1) *Journal of Pathology and Bacteriology*, January, 1909.
- (2) *Journal of Experimental Medicine*, January, 1909.
- (3) *Review of Neurology and Psychiatry*, June, 1909.
- (4) *Ibid.*, July, 1907.

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*Certain Insane Conditions amongst the Criminal Classes.* By JAMES P. STURROCK, M.A., M.D., Medical Superintendent, Criminal Lunatic Asylum, Perth.

It is not surprising that weakmindedness should be common amongst the habitual frequenters of prison, but the proportion of those who become certifiably insane is small. How very few are there of our ordinary asylum patients who come from the slums, or at least the criminal class. Is it that, in these less cultured individuals, crime and alcoholic excess take the place of insanity, each of them being a signpost marking

distinct paths of degeneration, or does insanity exist, but is not recognisable as such? The unavoidable importance placed upon conduct in determining insanity amid the ordinary respectable conditions of life may prove misleading in the case of those in whom what is commonly called bad conduct is a normal condition. A distinguished alienist tells how he was once called to see a lady, and on being introduced to her she spat in his face. Without more ado he sat down and certified her. It may be that many amongst the criminal classes suffer from there being no possible obverse to this picture. I have seen men sent into an asylum suffering from delusions of long standing whose condition never caused their friends a serious thought till some Monday morning they refused to go to work, and before next pay-day they were certified. I have seen men sent to prison for habitual failure to support their wives or for neglect of their children where there seemed to be distinct mental enfeeblement, not certifiably obtrusive like a delusion, but in the particular circumstances as potent a factor in the lapse of conduct.

The actual relationship between mental enfeeblement and crime is always difficult to determine. Besides, we must be very careful in diagnosing mental enfeeblement amongst habitual offenders. A hurried conversation with an illiterate tramp may be very misleading, and a full appreciation of right and wrong may, and does develop quite apart from the intricacies of a Board school education. Apparently, as with drink, so with mental enfeeblement; in many cases, much to the detriment of statistics, putting aside the ordinary breaches of the peace due to drink, which cannot properly be called crime, the drunken man and the defective are, when bent on crime, more easily found out. Many cases of sexual crimes would be certifiable were it not so evident that nearly all the uncommon and revolting perversions become active, or at least prominent, under the influence of alcohol. It may be that we should not look for any complex symptoms in the insane criminal, and that the weak-minded should be as certifiable for care and treatment as the more highly organised individual who suffers from melancholia or paranoia.

Even though the conditions that have tended to dissociate the old-time relationship between the prison and the asylum have been more especially at work during the forty years since

Bruce Thomson wrote that "12 *per cent.* of prisoners at Perth require special observation on account of mental disorder exclusive of those who become insane," we must expect to find a large number of mentally defective in prison. I wish here to draw attention to certain cases that emphasise to my mind the difficulties of determining the proper provision to be made for some of the mentally defective. The late Dr. Milsom Rhodes stated that 10 *per cent.* of prisoners are weakminded, and that almost all of those who violate the prison regulations belong to this category. I doubt if any prison official would agree entirely with the latter statement, but it is in this direction of resistance to discipline and intolerance of regulations that much mental enfeeblement is thrown into prominence. Much has been said of the effects of prison discipline and solitary confinement upon the degenerate mind. Solitary confinement is probably not good for any mind, but we must be cautious before we accept such a statement regarding order and discipline, as that the sane criminal respects the regulations, while the defective reveals himself by breaking them. We must not forget that in the great class in which defectives are to be looked for, cases of repeated breaches of the peace, common house-breaking, petty thefts, and assaults, we have individuals whose prospects and aims are of the lowest order, and who look forward to their liberation, not as the end of a period of deserved punishment, but as the regaining of that liberty which to them only means licence. That liberty, which so many troublesome habituels constantly talk about, is simply the craving to be at large to do as they please in contra-distinction to the liberty of the law-abiding subject, which is really a complex observance of the laws of custom and decency, and a studied adherence to the social order. Hence we must be careful not to place any undue pathological significance upon conduct during those repeated terms of imprisonment which, in a modern prison, are only irksome in that they are interruptions of this undisciplined freedom. In certain cases, however, this attitude, whether it be acquired or due to constitutional defect, leads to conduct of a more or less insane character.

The following cases illustrate, I hope, what I mean: No. 1 was at school till he was twelve, but was always amongst bad companions. His mother died at his birth; his father was a heavy drinker, and used, he says, to tie him to a chest and beat



him till he was black and blue. He spent some years on a training ship and was discharged from the navy for stealing. At eighteen he was a known thief. He has on several occasions assaulted policemen, prison warders and others. His own words best describe his condition when he drinks: "If you see me drunk you are better to keep out of my way." Previous to his present sentence he made his sister support him while he loafed about amongst his old companions because he could only get work at ten shillings a week, and that "would only pay his board." He is a good worker in prison, probably because otherwise his gratuity suffers, and one day, while working in a gallery, he had a dispute with a fellow prisoner. Had they been at large they would no doubt have fought to a finish and probably been good friends, but a warder, to quell the disturbance, had of necessity to send both to their cells. No. 1 immediately broke every pane of glass in his window. His reason was that the other prisoner was in the wrong and there was no use being locked up for nothing. He continued to behave violently for days, once attempting suicide, and finally, setting fire to his mattress, was found in a state of terror shouting for help, after which he did well to the end of his sentence. The suicidal attempt was of that peculiar kind that one meets with on occasion amongst imbeciles in asylums, more the result of peevish resentment than of mental depression, and apparently conceived by a childish process of reasoning to pay off some grievance. He tied his neckerchief in a single knot round his neck and lay quiet holding the ends till he heard the step of the warder coming to inspect him, and then pulled them as tightly as he could. He showed none of the ordinary signs of mental enfeeblement, and in his most destructive and violent moods I could always get him to desist and sit up to converse quietly with me. His conversation always showed a permanent undercurrent of irritation as if he felt that, whatever he did, the whole world was against him. He never, however, had any of the constant suspicion of warders and officials which some others show, and which seems to be just a further stage of this irritable mental resistiveness. He says he does not sleep soundly in prison but he has no complaints of this when he is doing well. He broke up his cell three days after his last admission, again as a protest against a regulation, and said it was partly because he had not slept for three nights for think-

ing of being caught, probably because he knew he was likely to get a convict sentence this time. This man appears to differ only in the intensity of the reaction from many cases of simple bad temper in the face of discipline, and in judging of the sanity of his acts, we must keep in mind the level at which his whole career has been carried on.

No. 2, with a similar history, attempted suicide by drowning at the age of ten because his father had thrashed him for misconduct. He was one day sent to his cell, after being twice cautioned by a warder for speaking to his neighbour in the workshed. Some few hours later he attempted to hang himself just at a time when he must have known from experience and the noise in the gallery that his cell-door was about to be opened by a warder to put in his food. Placed in an observation cell, he unfastened from his bed over a score of screw-nails and swallowed them. In hospital, where he was for some weeks under constant observation, he obtained a small iron knob from his night-stool and swallowed that, showing his disposition at the same time by telling me that he got it at the infirmary, where he was X-rayed, through the warders leaving him unwatched for a little—a statement which was proved to be quite false. He seemed astonished that he recovered, as he knew a companion who once swallowed one nail by mistake and died. His reason for his conduct was that he was no good in the world, but this statement was expressed in a peevish, resistive, somewhat insolent manner, and far from showing the depression to be looked for in ordinary melancholia. He thoroughly enjoyed himself in hospital, reading amusing and exciting literature, while he continued to threaten further attempts when he got out. He is still in prison, free from observation, contented and most industrious when he is given some task that touches his vanity, such as collecting and arranging the work of the other prisoners. He is ready to do anything cunning or smart, particularly if it involves some display of bravado. Yet it would be difficult, I think, for anyone to define any mental enfeeblement in him, much as one feels it is there.

No. 3 is a female inebriate. She has a long list of convictions for assaults, breach of the peace, etc., and is a very good example of the many cases of neuro-instability where reformation is not to be effected by curing an alcoholic craving. She

lived a "cat-and-dog" life with her husband, whom she married at seventeen, even before she took to drink, and one glass of whisky sends her out looking for a fight. In her case the outbursts of resentment are not kindled by ordinary prison restrictions, for, in the State Reformatory, she has practically the freedom and treatment of an asylum, and the attention of a staff which, for patience and tact, cannot, I am sure, be excelled. Her own reason for her outbursts of wild fury is that of many of her type—continually increasing resentment at being confined three years for what she calls a "simple drunk." She is a highly strung, excitable woman, who as a rule works nervously hard. Though illiterate and of low upbringing and habits, she is remarkably tidy in person, somewhat vain and conceited, and seems to think herself much better than the other inmates. She applies repeatedly for liberation on licence. What is actually a determinate sentence becomes for her that fear of all the criminal class—an indeterminate one, because she sees other inmates having their sentences reduced by varying periods of conditional liberation. She becomes more and more nervous—sometimes applying to me for a sedative—sleepless and irritable. A refusal of her request for liberation or some trifling misunderstanding with an inmate or official is then sufficient to cause her to attack someone or go to her room and smash up. Sometimes, when she is known to be excitable and is perhaps being kept well in view, she will accuse the warders of suspecting her of stealing. She has repeated attacks of palpitation, sometimes with præcordial pain and great anxiety, but these never occur till her irritation is well on the way from some other cause. Isolation or solitary confinement has no part in the origin of these conditions, except the wider isolation from freedom, for this woman never exhibited conduct of this kind until she was first sent to a reformatory. When at liberty her irritability probably drives her to drink and expends itself more easily in her freer circumstances.

Another typical case, sulky and irritable, had been teetotal and well-behaved for six years, till her mother, against whose wishes she had married, visited her one day and reproved her for some trifling fault, when she at once went off and forthwith began her degraded career again.

Nos. 4 and 5 differ from the others chiefly in that they are in the lunatic department. No. 4, born of respectable working-

class parents, drifted like the others into low company and dissolute habits as soon as he reached his teens. He served twelve sentences for housebreaking or assault and robbery, and had numerous reports in prison for insolence, refusal to work, etc. He stabbed a warder who had sent him to his cell for insolence. He said he felt he had been unjustly dealt with in being sent to his cell, and, seeing the knife, he used it in his anger without thinking of the consequences. He was afterwards removed to an asylum, certified as having delusions of persecution and suspicion, taking fits of passion without occasion of any sort, being uncontrollable and smashing his cell furniture and tearing his clothes. He was sentenced to H.M. pleasure, and since his admission he has had a constant succession of these outbursts. I cannot say that he has no occasion for them; every furious outburst has its starting-point in his misinterpretation, not necessarily insane, of discipline and order. When he breaks out his resentment lasts for days, he tears everything to pieces, and he has carried out destruction which would scarcely be credited. He will then pace his room all night shouting about being unjustly treated by the warder whose order was the cause of his resentment. These are not ordinary delusions of persecution. If I refuse to allow him free scope because he has lifted a knife from the table with which to attack the charge warder, I do not call it a delusion of persecution if he spends the night threatening to murder me because I do not give him justice. Every outburst is similar in origin to the following: He handed me a letter, after he had for some time persistently refused to exercise in the observation ward, preferring to remain in the corridor, in which he asked to be allowed to spend the afternoon in the large yard for the quiet privileged patients, telling me that if I did not grant his request and I wanted destruction he would give me my fill of it. With special arrangements his request was granted, and he was quite happy, seeking out for his companions men of his own habits. Then came the inevitable request to be allowed to stay on while the garden workers played bowls and half the staff were at tea. He was told this also would be granted as much as possible, but on the day he made the request he was kindly asked to go to the ward for a little as the staff was short. Five minutes afterwards the warder went to bring him back, but he was already threatening and began at once to tear



up, took to his bed and to his usual degraded habit of first breaking his night vessel and then defiling the floor. On one occasion he tore up everything because I would not let him have his melodeon in his room at night. When he quietened down it was returned to him during the day, but he dashed it through the roof-light, and threatened me for weeks because it could not be mended. He has, when excited, scratched his throat very slightly with a piece of iron wrenched from his door, and then thrust it through the inspection hole as a warder looked in with the intention of injuring the warder's eye. When he is quiet he is perfectly rational, pleasant and intelligent, and could he have a villa and six attendants prepared to humour him in everything I doubt if he would have many outbursts. It is interesting, in determining the exact significance of this man's conduct, to recall the nature of his crimes when at liberty. He is well known to the police as a lazy corner-boy of the worst type. A policeman had occasion to be constantly moving him and his companions from a certain entry in town. One day, after this man had been moved on several times, he secreted a piece of railing in the stair, and when the policeman next appeared and followed him into the entry he was savagely assaulted and injured with the weapon. This is the same reaction under different circumstances as when here, on his best behaviour, he one day lifted a dinner knife and hid it in the lavatory, saying afterwards he put it there for the charge warder if he could not manage him with his hands. I have a patient very similar in type, always suspicious of warders, but who has not yet broken out, sentenced to King's pleasure as being insane, whose crime consisted in following an elderly gentleman into a stair, garrotting him and stealing his purse. Such conduct, however, in these men should not influence the diagnosis of insanity, but it has a most important bearing upon their treatment.

No. 5 pled guilty to a murder charge and threatened to commit suicide if he were reprieved. His conduct is similar to that of No 4, except that he carries the degrading features of his outbursts further, which is not to be wondered at from his disposition. His character is low, his ordinary conduct cunning, but in its general sequence the latter reveals a constantly varying emotional condition and a peevish, childish determination, which, if it is not mental enfeeblement, is certainly the starting-

point of his excited attacks. He can be trusted more than the last case, his excitement seldom taking the form of assaults and being easily anticipated, so that in general he is working in the garden or in the ward. At work he goes at high pressure, insists on hoeing three drills of potatoes for every one of the others, has bursts of religious pretensions varied with filthy language and most unchristian acts, and is invariably kind to helpless inmates. There is no trace of other intellectual enfeeblement about him, but the following incident shows something of his peculiar mental state. He is very fond of concerts and attends every one. Recently he was prepared with a bouquet of flowers for the lady who was giving an entertainment to which he had been eagerly looking forward. Unfortunately she did not at once notice him when she came in, and he was much downcast and left looking fit to cry. His disposition prompted him at once to write to the authorities complaining that the inmates' leisure time was being stolen from them to give concerts which no one ever wanted to attend. It would take too long to show by daily examples of this sort how much of this man's conduct is due to a mental twist of some kind. He tore up one day because he did not get his clothes at once in the morning, after having promised me to keep his bed for a day on account of a sore knee. When he is in one of his destructive, dirty moods he lies in bed reading his newspaper, laughs and discusses quite sanely with me the sporting news, all the while his walls are decorated with filth, and he tells me he does it all to fight me for his rights. For many months now he has been continually studied and humoured like a child in spite of repeated troublesome sane conduct, but he is not so well on the whole as he used to be for a long period after he had an outburst. The charge warder constantly assures me what I feel is quite true that the man would be better if he had a burst, just as if our treatment of him had the same effect on his emotional centres as bromide has upon the motor areas of many asylum epileptics. Dr. Macpherson, who has seen this man at his worst, says he has never seen conditions so closely resembling acute mania as these outbursts, and yet he could not characterise them as such. I am certain from close observations that there is no mental confusion present in any of these outbursts. This man often threatens suicide in an angry, resentful way, but he only once attempted it, running his

head against the door in one of his tempers and desisting the moment he felt it sore. There seems little doubt that he was unfit for convict discipline, but there is a doubt as to whether, if he were at liberty now, his conduct would ever take a form that would suggest insanity. When he drinks he is said to be quite wild and erratic, impossible to please whatever attitude is adopted towards him.

Wherein lies the mental defect in these cases? The term "explosive" I think well expresses the condition in that it is not so much the conduct after an outburst that constitutes the defect—that varies very much with the disposition and ordinary habits—but rather the mental instability which is so easily kindled into uncontrollable impulse. I have not seen any periodicity about these attacks; frequent they may be, but in view of the history of the outbursts in these cases which typify the group, no periodicity need be looked for. I do not think the term "explosive" need be restricted to cases of destructive habits or violence but have included the suicidal case No. 2 as I consider the underlying mental state to be similar in all of them. Very many cases of homicidal impulse now in the lunatic departments at Perth show, after recovery, this same disposition without perhaps the baser accompaniments. Mental resistiveness, childish petulance, aggravated jealousy, dispositions that will not brook contradiction are so common in otherwise recovered puerperal cases as to throw much light upon the undercurrent of their impulsive acts, though when we meet these same characteristics in the ordinary prisoner we may overlook them in face of the more evident criminal propensities.

It may be argued that these are simply cases of ungovernable temper in persons of bad habits and criminal instincts, that the treatment they need is not mental care but rigid discipline and moral training. I might, however, point out that the theory of congenital mental defect is supported by the early age at which all of them began to show perverted habits amid varying grades of home circumstances and example, and by the fact that, with few exceptions, the cases I have met have had reformatory training without result. It may even be said that some of the men are merely hooligans fostered by the modern humane treatment in prison and out of it. True it is that the prison punishments now inflict no bodily pain, and that to an

ordinary habitual a day's bread and water and the complex administrative machinery with which the ignorant offender finds himself in conflict after a simple offence seem in some cases to act as mere irritants. But corporal punishment is not likely to affect the least defective of these. The condition is not a recent creation; in former days they were less scientifically known as "prison breakers," and from all accounts they were far more numerous than they are to-day. Fifty years ago one notorious case who was seen in consultation by a mental specialist and pronounced of perfectly sound mind used to "bring her head against the wall with a sickening series of cracks and wrench up the flooring of her dark cell, battering away with the planks at the door till the whole prison seemed to be coming down."

In another group of cases this same mental resistiveness, with its resulting irritability, appears in association with peculiar illusions and ideas of suspicion and persecution directed against prison officials and referred to the prisoners' surroundings. Here we touch upon the possible effects of solitary confinement producing insane ideas by the introspection which it favours. I do not here refer, however, to those cases that approximate to paranoia, but to certain forms where the insane ideas are of a very fleeting and changing type, and seem to have a causal connection with the mental irritability awakened in defective cases by prison restrictions.

The simplest form is shown in a prisoner, a young man who has led a career of crime since he was twelve. Although he talks intelligently enough for his education, and has a ready speech, as befits his occasional occupation of a street flower-seller, most experienced people would say there is some enfeeblement about him. He broke his dinner-dishes one day because his soup was "poisoned." He said he knew it was tampered with because of the bad taste in his mouth, and I am sure that at the time he believed it. He suffers from a slight chronic dyspepsia, and his breath is always foul. He has only made this complaint twice, and on both occasions he was at the time under report for an offence against the regulations. The connection between his irritation against the warders, his mental enfeeblement, dyspepsia, ideas of poisoning and dish-breaking is not difficult to make. Though he has no complaints of such a nature at any other time, he still insists that on both



these occasions something was put in his food. In conditions such as this we must remember the part that ignorance plays in the causation of the many absurd ideas that prisoners express regarding warders and others. I had a woman under observation who was illiterate and ignorant, but not, in my opinion, at all defective. In the middle of the night she rang the bell; the matron who visited her found her sitting on the edge of her bed, having almost certainly jumped up in a nightmare. She insisted till the day she went away that she was pulled out of her bed, for she wakened in a fright to find herself sitting up.

These prisoners are all right when at liberty and amongst people and rules they understand, and the man whose soup was "poisoned" is not likely to be certified out of prison, apart from his slight enfeeblement.

Transient delusional states are common. There is a case of homicide, while insane, now practically well, except that at very long intervals, and always after not sleeping well for a night, he excitedly tells me in the morning that the night patrol, while going his rounds, was kicking up the gravel as he passed beneath his window just to annoy him. He may be perfectly well afterwards for months, except for an irritable display of temper, but with no trace of suspicion or delusion against anyone till this neurasthenic crisis recurs.

The most difficult and interesting cases are in the convict prison. Those that I have investigated show invariably the following sequence: the breaking of some regulation, a report to the Governor, and perhaps a mild punishment—the worst is deprivation of good conduct marks, as that prolongs the sentence—smashing up of cell furniture or windows, and then a referring of the whole incident to some persecution practised upon them. The origin of these ideas of suspicion is very doubtful. Most of the cases seem undoubtedly enfeebled mentally. In many instances there are merely constantly reiterated grumblings superimposed upon ignorance and mental defect and not amounting to delusions. In some cases the ideas are nothing more than degenerate romance, reminding one very much of cases met with in ordinary life, where some highly improbable personal incident is often related and embellished by an individual so that he appears to believe it, though none of his audience ever do. There is also ample evidence to prove that the ideas are borrowed by one convict from another. There is

nothing mystical about the delusions. If a prisoner has been reported by a warder, his food has been "tampered with" by that warder. There is a constant air of suspicion about most prisoners which is not necessarily insane but very much the result of their own habits. So that it is not difficult for a mentally defective convict to evolve absurd ideas out of trifling acts of observation and discipline which a warder has to exercise under a strict and silent penal system.

I have at present under observation a convict who began to steal at the age of ten, has been out of and in prisons ever since, and has served long sentences at Peterhead. There is no doubt that he is mildly imbecile, but he has had an extraordinary career. He has a most powerful imagination; he will keep me listening for hours to accounts of his treatment in Peterhead, interspersed with impossible tales of his life out of prison which make me certain that the whole thing is degenerate romance. He has been for some months under my care, and probably because of the relaxation of the discipline and the granting of almost every addition to his diet in reason there is no delusion forthcoming regarding his treatment here. He will give the exact dates for years back of the occasions when gas was blown into his cell, poison or some medicine from the doctor was put into his food, etc. He tells tales of detectives watching him when at liberty—which they no doubt did—embellished into something very like certain forms of juvenile literature and the most extraordinary stories of hospitals he has been in, not delusions, but absolutely impossible romances, concerning the conduct of the staff from the doctors downwards. His character since he first entered a prison is that of an incorrigible chatterbox, and it is no wonder that he was continually in trouble at Peterhead. If he was asking extra coffee for supper and was refused he would, on the first occasion of punishment, say he was getting a "tampered" supper. Similarly with many other cases. Mental enfeeblement, ignorance, resentment to discipline, vicious tendencies, and anti-social habits and ideas are the foundation of these quasi-delusional states, which are of a fleeting nature, are not accompanied by true hallucinations, and are more or less evident according to the behaviour of the prisoner and the amount of indulgence that is given him on account of his defect. The last case well illustrates the difficulties of providing suitable treatment for such defectives under

any circumstances. Under the slightest pressure of disciplined restrictions he is constantly, and is likely always to be, at war, while his disposition and habits lead him to take such advantage of every allowance and indulgence made for his mental deficiency as to render order an absurdity if these privileges are to be carried to the fullest extent necessary to please and keep him quiet under detention.

One outstanding fact is that these ideas disappear entirely when the sentence is ended. The circumstances are altered to the prisoner's entire satisfaction, and in his normal surroundings mental enfeeblement of itself is not obtrusive. I do not think that any of the cases I have seen had any thought of malingering insanity. That is a highly intellectual process, I think—quite above the level of the prisoners in whom these delusional states are found. I have learned from old prisoners in asylums that they would much rather have a sentence and be done with it than be certified. It is the grievance of many King's pleasure cases who are detained for ordinary crimes of which they have been acquitted on the grounds of insanity.

The only radical treatment for these cases would be the approximation as far as possible of their conditions during detention to those they enjoy at liberty, and the difficulties of that treatment are self-evident. Association in place of solitary confinement must be looked at not only in the light of history on the state of matters that prevailed before the long-sought-for solitary system was instituted, but also with a complete knowledge of the disposition and conduct of certain convicts, which are undoubtedly more serious matters than many people suppose. The methods of indulgence that must be employed to keep these outbursts under are not likely to cure the mental defect, and I have tried every form of drug for the explosive conditions without much good results. If the inherent defect, then, is an ineradicable quantity and these cases are unfit to be at large, which will not, I think, be doubted, whatever be the view taken of their mental condition, there are two extremes of treatment available. The most natural, or rather primitive, and the one that would probably commend itself to the prisoners, would be to remove all artificial restrictions and supervision, giving them the liberty they desire in a community cut off from the social system, so that they could indulge their primitive instincts, settle their difficulties in their own fashion,

and on the principle of the survival of the fittest, probably evolve a better type. But that is not in accordance with modern standards. The other extreme is the expensive method of depriving them of their liberty, whether by an indeterminate sentence or a medical certificate matters not, and, as compensation, providing such extensive supervision as will ensure the safety of the public and at the same time afford the maximum amount of freedom. The ideal system would, of course, be to associate each individual with good companions, and whatever system be adopted for these defectives it will be expensive in proportion to its success. The difficulties of treatment are evidenced by the experience of the State Inebriate Reformatory and Lunatic Department. In the latter the lunatic criminal is not yet very largely represented, but the treacherous combination of several semi-sane convicts would require, in a fully associated system, attendants possessed not only of patience that would be difficult to procure in any very large quantity, but of something more than "second-sight."

A difficult problem is the ultimate disposal of such cases. Apart from the difficulty of deciding whether or not all these cases are to be put under restraint and undergo treatment entirely based upon the recognition of a mental defect, there is the substantial difficulty of obtaining a certificate of their insanity on their discharge from prison. It is remarkable how even a truly delusional prisoner can pull himself together as liberation approaches. I discharged lately a very rough, dangerous character, defective, ignorant, suspicious, and certifiably insane from his conduct during his short imprisonment for culpable homicide. On his liberation it was found impossible to get out of him, after the most careful examination, one single fact to justify a certificate of insanity. It may be that the next we hear of him will be another assault, when his history will probably be recalled and he will be sentenced to H.M. pleasure.

If a prisoner be certified insane while undergoing imprisonment, whether he finishes his sentence in the lunatic departments or not, his ultimate destination, if he does not recover, must be an asylum. No one will deny that whatever the provision made for him, it should be entirely free of prison *régime*. If the treatment of the cases I have mentioned is to be based upon mental defect it should also be of an asylum character



in the first place, though discipline and even punishments of the better type—the deprivation or granting of privileges that tend to instil self-control and habits of work—must have a place. Whatever may have been the career of a prisoner it is only common humanity that his mental condition should receive proper treatment. There are obvious disadvantages to his being treated at first amongst the better-behaved inmates of an asylum, but there is no justice in keeping him in the vicinity of a prison whatever methods may have to be employed for his care and treatment. Many cases, though unfit to be at large on account of their vicious habits, become otherwise so well after a stay in an asylum that they cannot be detained, and they are no sooner out than the whole process begins its round again. Some of these are then, at the first offence, sent to the criminal lunatic department. There are obvious objections to this method. It intensifies all the conduct which in the inmate is associated with his attitude to prison, even although the treatment is purely asylum in character. The indefinite sentence, the association with, and conversation of, some of his fellow inmates all tend to discontent instead of submission to treatment. There are as good objections, too, to mixing up vicious defectives with the many respectable inmates in the State asylum as in an ordinary asylum. There is also the objection of the defective but mild offender to his being sent, and that for an indefinite period, to associate with homicidal cases. Legislation for the mentally defective who are not, according to law, certifiably insane, may make many of these questions clearer. When it does come, the mass of criminal defectives and their proper disposal in those comparatively unrestricted circumstances, which I believe will alone combine treatment, safety and contentment, will be a difficult problem indeed.

#### DISCUSSION,

At the Annual Meeting held in Edinburgh in July, 1910.

Dr. DUNLOP desired to express his high appreciation of Dr. Sturrock's paper, which was of great interest to all. He had had ten or twelve years' experience of the class spoken of, and after a considerable acquaintance with the subject and hearing much evidence on the Commission to inquire as to the feeble-minded, he might be allowed to say a word. Dr. Sturrock's main conclusion was one which nobody could controvert; everybody who had been interested in the subject had arrived at the same conclusion. Those unfortunates of the class referred to, who went in and out of prison, required to be segregated, as they were not fit to be at liberty. Their conduct was dependent upon mental deficiency. The author had

selected some very difficult cases, and he would like to say, by way of warning to others present, that some of the cases met with in prison, which were habitually in and out of prisons, were more exaggerated cases of insanity than Dr. Sturrock had given an idea of. For instance, one man, a paranoic, spent fourteen years in prison out of seventeen years; he imagined that there was a phantom running up and down and interfering with his getting work, and in order to procure something to eat he got into stables and stole clippings of horsehair, which he sold for a few pence. Among demented there were several instructive cases which he had known during the last ten years. One was that of a respectable woman who, unfortunately, became insane. She was treated three times for long periods in asylums, and then discharged in a condition fit for liberty if she had had friends and relatives to care for her. But she was not of the class who had anyone to care for her, and ever since then she had been spending her life in and out of prison—short sentences each time. Certainly her downfall dated from her discharge from the asylum. He mentioned that in order to show the great necessity of having some machinery for securing the care of the unfortunates who got into our prisons. But how that was to be brought about was a very difficult question. The Commission of which he had the honour to be a member, in its report advised that it should be the duty of county councils in England, or of the district lunacy boards in Scotland. His own opinion was that it was a matter for the State or the Crown to deal with. And more especially was this so in Scotland, which is only a small country, and the total number of such persons there was comparatively trifling; he believed there were not more than three hundred of them all told. If those were collected into one State asylum—in which the patients would be maintained at the local cost, otherwise it would be open to abuse—the whole matter would be satisfactorily dealt with. He had for years felt the necessity of something being done, and he thoroughly appreciated the paper in drawing further attention to that class.

Dr. PERCY SMITH said he had been very pleased to hear the paper, as he was familiar with the cases written about, being one of the Board of Visitors of the State Inebriate Reformatory at Aylesbury, where there were large numbers of persons of the type described, persons who probably had never in their lives exercised, or been capable, of self-control. They were irrelevant in conversation and were unable to accept an answer to anything as final. They were explosive, irritable, and often violent on the least occasion, when they would instantly seize wardresses by the hair. There were cases who had periodical outbursts of extreme fury with destructiveness. They were like cases of acute mania, but, as the author said, they were not confused at the time, but always knew exactly what they were doing. The outburst generally passed off in a short time and was usually due to some slight correctional, disciplinary measure. The practical difficulty was, that even with those who, by careful observation, were considered insane and certified and sent to asylums, the asylum people would not keep them. As Dr. Dunlop said, the patient was sent to the asylum a semi-criminal. After a short time he behaved well and went out, and his last stage was worse than his first. There was considerable difficulty at present in the State reformatory in that the London magistrates would not send the people there for sufficiently long periods. Three years kept them out of mischief and in fairly good health, but probably this period was not long enough. Many of the patients required re-detention, and that should be possible on the least relapse without any formality. The London magistrates were now largely reverting to the old practice of sending patients who were drunk and disorderly to Holloway for three days. But often they were back again in a week in the same condition. Whether detention in an inebriate reformatory did good or not, a sentence of three days, resulting in the prisoner being back again in a week, did no good at all. Probably some permanent seclusion from the community was necessary for many of the people under discussion.

Dr. ROBERT JONES said that as one of those who received the people under discussion he could support what had been said about them. They were most difficult people to control in a ward; they upset the discipline of the whole ward or block of the asylum. It was very creditable to a public body, the Commission for the Feeble-minded, that it had discovered the moral imbecile. He had had many such cases, and in one he had careful *post-mortem* notes made. The brain was simply ill-developed, with scarcely any complexity. He was more and more convinced that the chief power of the cerebral cortex was inhibition. As these

persons had defective inhibition they were most difficult to direct and control. He did not think there was anything to be done for them, except what was suggested by the Commission on the Feeble-minded, namely, keeping them in some definite place for education and encouragement. But it would need to be a large asylum to contain them all, as in one large asylum he had had there would probably be hundreds of them. He would refer to the committee which the Association had formed, and which it was suggested should be enlarged, namely, one to work with the school medical officer. It was important that these moral imbeciles should be discovered early, and something made of them, if possible.

Dr. BRISCOE asked if Dr. Dunlop would say whether alcohol played any part in the cases described. The Salvation Army got hold of a lot of those people, and its officers said that if they could keep alcohol away from some cases these would be all right.

Dr. DUNLOP, replying to Dr. Briscoe, said alcohol was a frequent element; but in many cases stoppage of the alcohol did not stop the occurrence of the outbursts.

Dr. STURROCK, in replying on the discussion, said the estimate of the lack of the power of inhibition had been exaggerated in many cases, and the difficulty of treating such cases was not always due to the defective inhibition. He had one man who was suspicious of warders; he was working as a tailor, and had been wearing his slippers, but one morning he put his boots on, and it was ascertained that he was expecting a fight. He was a defective. His crime before he came in consisted of waylaying an old gentleman in an entry and stealing his pocket-book. Much of his conduct was dependent on that temperament, not on lack of inhibition. The moment one began to apply freer methods to them, one required a huge body of attendants; and it would be a very expensive matter if the whole of the mental defectives were to be placed under the amount of supervision necessary to keep them not only sane, but contented. Then would probably come about that state in which the inhabitants of the British Isles would make a living by taking in each other's lunatics.

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*Eugenics and Degeneracy.* By C. T. EWART, M.D., Senior Assistant Medical Officer, Claybury Asylum.

THE object of this paper is to consider whether it is necessary or advisable to introduce ordinances for the discouragement of parenthood on the part of the "unfit," and the encouragement of large families on the part of the "fit," in fact the eugenic principle, and to those who believe that the only true cure of insanity is its prevention, the subject must be of vast importance.

If we recall for a moment the history of the rise, progress, and fall of the various nations which have been pre-eminent in the past, we find that the same course has been experienced by each: there has been a period of hardship and energy, accompanied by development, followed by a period of luxurious quiescence during the supremacy, and this has been succeeded by a decline and fall, a study of events during these periods showing us that it is by the interference of civilisation with

the process of natural selection that the decline and fall is brought about. So soon as the necessity for striving and struggling is past, there is no longer the extermination of the weaker members, and their proportion steadily increases, the standard of the whole country is lowered, and there is a diminution in the mental, moral, and bodily powers, and an increase in the numbers of those who are unable to properly fulfil the duties of citizenship, until finally there is a preponderance of the latter, and the doom of that country is sealed.

Two explanations, each falsely asserting itself to be rooted in biological fact, have long been cited, and are still cited in order to account for these supreme tragedies of history. The first may claim Plato and Aristotle as its founders, and consists of an argument from analogy. Races may be conceived in similar terms to individuals, and just as the individual is mortal, so is the race. Each has its beginning, its periods of youth and growth, its maturity, and finally its decadence, senility, and death. Biology, however, declares that whilst the individual is doomed to die from inherent causes, the germ-plasm is immortal, and has no inherent tendency to cease to exist. Species now flourish which are millions of years older than mankind, and the Jews have survived one empire after another of their oppressors, so that it is not races that die, but civilisations and empires.

The second false interpretation widely credited is that in consequence of success a people become rich, idle, and luxurious, and that these acquired characters are transmitted to succeeding generations, so that finally there is produced a degenerate race unable to bear the burden of empire, and then comes the crash, but this theory of Lamarck of the transmission of acquired habits of luxury and sloth from parent to child, the modern study of heredity empowers us to repudiate.

What theory of this alleged degeneration is there to offer in their place, and especially, what theory which explains racial degeneration amongst, not the conquered, but the conquerors amongst the successful, the imperial, the cultured, the well cared for in all respects, mentally and bodily? Why is it that not enslaved, but imperial peoples degenerate? Why is it that nothing fails like success? The reason is that no race or species, vegetable, animal, or human, can maintain its organic



level, let alone raise it, unless its best be selected for parentage. When a race is making its early way, by force, selection is stringent. The weak, diseased, and stupid are ruthlessly expunged from generation to generation. As civilisation advances, another ethical standard is reached: the diseased and feeble-minded are no longer left to pay the penalty sternly exacted by Nature for unfitness; they are allowed to survive, which is well, and to multiply, which is ill. Babylon lasted 4,000 years, and yet, at last, it fell. If selection had been operating throughout that time, would Babylon have fallen?

Without selection races must deteriorate, the lower individuals multiplying more rapidly than the higher in accordance with Spencer's law, that the higher the type of the individual the less rapidly does he increase, and the race which is not advancing is retrograding as Gibbon declared (Saleeby).

From the evidence given before the Royal Commission we learn that in England and Wales 271,607 persons are suffering from mental defect, that 120,000 are certified lunatics, and 150,000 are not sane, but are not certifiable, while 66,000 urgently need proper supervision. Of the inmates of the Poor Law Institutions, excluding pauper lunatics, from 12 to 18 *per cent.* are mentally defective. In the elementary schools 35,000 children are mentally defective, and in our prisons there are to be found every day from 3,000 to 4,000 mental defectives.

From these figures it is evident we have in our midst a class of persons contributing to the degeneracy of the race. But that is not all. The problem of the feeble-minded is intimately associated with the problem of insanity, epilepsy, alcoholism, and consumption. Again, such questions as the housing, feeding, and remuneration of the working classes, infantile mortality, teaching, employment, and pauperism are in urgent need of attention, but measures to deal with these matters cannot solve the problem of national degeneracy. National progress can only take place when means are taken to increase the fit and decrease the unfit. The establishment of suitable farm and industrial colonies is the only method whereby society can be protected from the feeble-minded. There they would be far happier than in the outside world and would contribute to their own support. Nothing is more wasteful than this army of degenerates who, when they are not living at the

cost of the taxpayer in workhouses or prisons, are wandering at large, idling, pilfering, injuring property, and polluting the stream of national health by throwing into it human rubbish in the shape of lunatics, idiots, and criminals.

Dr. Ettie Sayer, in the course of her work for the London County Council, studied the family history of 100 normal families and 100 families where mental defectives were found. The normal family averaged five in number, while families showing abnormality averaged 7.6, or nearly one-third as many more; 42 *per cent.* of the abnormal families, compared with 6 *per cent.* of the normal, showed parental drunkenness; 13 *per cent.*, as compared with 3 *per cent.*, showed consumption, whilst insanity, suicide, epilepsy, and other diseases were also shown in excess amongst families of aments. In a group of 100 normal and 100 abnormal children examined by Birmingham doctors the contrast between the family histories was very marked; twenty-eight abnormals had an insane, feeble-minded, or epileptic history, compared with 10 *per cent.* among the normals; in forty-three of the abnormals a consumptive history was found, which appeared in only 17 *per cent.* of the normals; 41 *per cent.* of the abnormals owned an alcoholic family history, as compared with 22 *per cent.* of the normal.

Of our diseased and defective population almost every individual is maintained either by charity or the State. To these families belong the recipients of half the doles of free boots, free meals, and indiscriminate charity of the neighbourhood. In short, we are looking on at a process of selective degeneration carried out on an extensive scale by State and private philanthropy. For the purposes of the Royal Commission the National Association instituted an inquiry in connection with all the larger Magdalen Homes in England. One hundred homes sent answers, which showed that 14,725 inmates had passed through the hundred homes in the course of three years, and of these 2,521 were stated to be feeble-minded. These feeble-minded women were known to have added 1,000 illegitimate children to the population.

We fail to see that we must educate both sexes. It is of little use that a girl had played centre forward at hockey or had been a wrangler if she could neither produce a baby nor nurse it. Education which teaches a girl to despise motherhood, whilst making her incapable of it, is not "higher" but

"lower" education. The whole theory of eugenics rests on the distinction between the right to live and the right to become a parent. It does not propose to kill anyone, and it hails every political party and every reform which contributes to its end. No eugenicist believes in the theories of Plato, namely, that the bridegrooms and brides are to be mated by lot, and the lots to be so manipulated by officials as to bring together superior persons of each sex and to keep apart the inferior, who were to mate with each other, the offspring of the first set of unions to be regarded as "children of the State," and the children of the other unions to be put away.

What makes the science of eugenics possible is the law of heredity that "like tends to produce like," not "that like produces like." It is common experience that superior persons produce inferior children, and that inferior persons, though much less often, produce superior children. Eugenics deals with averages, and in the average the law of heredity acts with practical certainty, and all race questions are questions of average. With regard to heritable diseases, what is meant is not the transference of the disease itself, but the transmission of a predisposition to it, and this is effected through the medium of the germ-cells. Negative eugenics teaches us what to prevent, positive what to encourage. The "fittest to survive" are those who possess sound health, energy, and a well-balanced brain. These would be most likely to be useful to themselves and to the community. The greater part of feeble-mindedness, insanity, and criminality could be eliminated by segregation in one generation.

So little attention has been given by the State to the physical development of the people that, unlike those continental nations which have adopted universal military service, it has, at the present time, no physical standard whereby the male youth of corresponding ages could be compared. The *Army Medical Report* for 1907 gives 59,393 as the total number of medically inspected; of these, 17,513 were found unfit within three months of enlistment, making the rejection ratio 29.483 per 1,000 examined. In this calculation no account is taken of candidates so manifestly unfit that they were not submitted by the recruiting officials to the medical staff for examination. The average age of the medically inspected was 19.2 years, average height 65.6 inches, average weight 122.2 lb., while

the average height of males of the general population between eighteen and nineteen years of age is  $67\frac{1}{8}$  inches, and their average weight  $138\frac{1}{2}$  lb. These figures do not, however, convey the whole truth, for the average height and weight of males of the strata from which the recruits are drawn are still lower and the recruit is the "fittest of the unfit of the people." Of all diseases there is none more intimately associated with impaired nutrition and with lowered vitality than heart disease, which, therefore, with other circulatory diseases, affords an index of national health and of racial quality not otherwise obtainable. In 1907 the total number of rejections on enlistment for these diseases was 2,337, a ratio of 39.35 per 1,000 medically examined.

*Table showing Cardiac Affections. Ratios per 1,000 of Strength.*

United Kingdom, 1907.	France, 1905.	Germany, 1905.	Austro-Hungary, 1906.	United States, 1906.	Russia, 1905.
8.1	3.5	3.6	3.9	3.37	3.5

When it is considered that the mortality from diseases of the heart and of the blood-vessels of the civil population in England and Wales in 1907 was more than one-seventh of all the deaths, the importance of this question cannot be over-rated. Unfortunately the responsibility of the State for national health relates to environment, the notification of infectious diseases, Poor Law relief, and partially to the care of children during school life. In all other respects, excepting criminal offences and the custody of the insane, the individual is subject to no supervision.<sup>(1)</sup>

In the problems of heredity we see as yet but as in a glass darkly, but it is gradually dawning on many that the proper study of man is mankind. In our wise and beneficent search for better conditions of life we should not forget other influences, which even more than environment goes to make personality. To improve the conditions in which life is passed and by which it is moulded is but to deal with the lesser part of the problem. The deeper question, the conscious solution of which is opening out to all civilised nations, is how to maintain and, if possible, to improve the innate quality and character of life itself. The average quality of a race is but the average quality of the individuals composing it. If by increased medical knowledge the feeble-minded and weak-bodied stocks be allowed to survive,



and if, as it seems to be the case at present, they reproduce themselves faster than the better strains, the relative numbers of such persons in the country must increase and the average quality of the race deteriorate. If by economic and social conditions children be made too heavy a burden on the more desirable elements of the population, there is danger that the thrifty and far-seeing members of the community will postpone marriage, and when married restrict the number of their offspring. Thus while the weak and careless elements grow at an increasing rate, the good stocks of the people check their growth and the selective deterioration of the race is hastened in two ways.

We learn from the Registrar-General's returns that in order that a population should maintain its numbers unaltered, four children must be born to each marriage; of these four, on the average of large numbers, two will either die early or have no children, and the other two will be left to continue the race in the place of their parents.<sup>(2)</sup> Certain large classes now produce an average of only three children to each fertile marriage, that is, only three-quarters of the births necessary to maintain their numbers unaltered. If their death-rate be taken at 15 per 1,000 their birth-rate must be three-quarters of 15, or rather more than 11, that is, about 4 less than the 15 needed to replace the deaths. At the end of a century—three short generations—each 1,000 will be represented by only 687 and in 200 years by 472.

The birth-rate of other sections of our people is still 33 per 1,000, or 13 more than are needed to balance their higher death-rate of about 20. At the end of 100 years each 1,000 will become 3,600 and in 200 years about 13,000. Since 1875 a serious change has arisen. Large families are rare in the upper and middle classes and also among the higher ranks of the skilled artisans, but they are still usual in the thriftless ranks of unskilled labour and among the feeble-minded in our midst. Only one generation has yet suffered and the results are only now appearing, but the calculation of the numerical effect of a selective birth-rate shows that no time is to be lost if the quality of the race is not to deteriorate with ever-increasing rapidity to the lowest types. The Hearts of Oak Friendly Society is formed by an upper class of skilled labour, and it provides a benefit of thirty shillings for each birth of a child to

its members. From 1866 to 1880 the claims rose from 1,176 to 2,472 per 10,000; from 1891 to 1904 they fell from 2,472 to 1,165, a decline of more than half. A similar friendly society gives a decline of 56 *per cent.* If the prosperous artisan member of these two societies alone had maintained their rate of reproduction in 1904 as in 1880, nearly 70,000 children would have been born to them instead of 32,000, and these children would in all human probability have become sound, healthy, and useful citizens.

In taking the class represented in the peerage and baronetage it is found that marriages taking place between 1831 and 1840 gave an average of 7.1 births to each fertile couple; from 1841 to 1860 the average for each decade remained constant at 6.1; from 1871 to 1880 there were 4.36 births to each marriage; from 1881 to 1890 3.13 births are recorded. Thus during the past fifty years our stable upper classes in this section have reduced their birth-rate by more than one-half and have passed well below the point at which the number of births compensates for the number of deaths, and their virtual extinction is only a matter of a few generations. In *Who's Who* there are biographical details of some 20,000 men and women who may be taken as representing the upper, official, professional, and commercial classes. Fertile marriages of 143 laymen before 1870 resulted in an average of 5.2 to each couple, after 1870 the average is 3.08. In clerical families before 1870 the average of the children was 4.99, after 1870 an average of 4.2. Taking marriages of those who have served in the army and have attained to the rank of captain, before 1870 the average was 4.98, after 1870 the average was 2.07. In the statistics relating to Roman Catholics and tabulated from *Who's Who* and the Landed Gentry, the average of children from 1871 to 1890 was 6.6 to each fertile marriage.

If men represent the income to be used and spent freely by each succeeding generation, women must be considered as capital to be spent sparingly in the present and to be husbanded carefully for the future, and for the welfare of the race it is important to watch zealously the employment of women in the industrial sections of the people. From the reports issued by two of the women's colleges at Oxford and Cambridge, and excluding those who have left within three years, out of some 3,000 only about 22 *per cent.* subsequently married, but there is

no record of the number of children born, which is most likely very small. The proportion of marriage is distinctly higher among those who do not take the final examination or fail to obtain honours. Does this mean that exceptionally capable women are rendered unfit or unwilling to discharge their natural functions? The problem of "cause or effect" is of the gravest import. We have clear evidence that the birth-rate among married women teaching in the elementary and secondary schools is very far below the average rate of the classes to which they belong, and for the race the ability of the mothers is at least of as much importance as that of the fathers.

The importance of heredity in the animal kingdom is never for a moment doubted. By careful selection and marking special breeds are obtained—in horses, speed, endurance, and strength; in cattle, size and dairy qualities; in sheep, the texture of the wool; these being only a few examples of what can be attained by taking into consideration the parentage. Are the physical and mental characters of man inherited to the same extent? The answer to this question is given by Professor Karl Pearson, and it is based on observations made on between 5,000 and 6,000 school children. It was shown that the degree of resemblance of members of the same stock for eight mental and moral characters and for eight physical characters, in the case of pairs of brothers, pairs of sisters, and pairs of sisters and brothers, is sensibly identical.

A king of France discovered an ancient man engaged unremittingly in the planting of date-kernels: "Why," he asked, "do you grow the seeds of a tree of such tardy growth, seeing that the dates will not ripen till a hundred years be passed?" The old man answered, "Am I not then eating the fruit of trees planted by my forefathers, who took thought for those who were to come, and shall I not do like unto them?" Our duty of all duties is to transmit the sacred torch of life undimmed, and if possible a little brightened to our children, and the basis of the new biological ethics of to-day and of the future is that everything is right that makes for the welfare of the yet unborn and all is wrong that injures them, and to do so is the unpardonable sin.

Many thoughtful observers are coming to believe that one of the greatest advances of the near future will be the recognition that education must more directly include preparation for the

supreme civic duty of parenthood, and that all wisdom of whatever order must be justified in the children of the generations that are to be. When woman perceives that to her is entrusted the greatest of all human assets, the child during those impressionable years, consecrated to character, formation and physical development, it will be like a trumpet call to awaken her to her weighty obligations, imperial, domestic and social, for the web of civilised life is woven by woman, and it is her concern to raise the tone of life in all its relations, it is her privilege to maintain the health of every human being, and upon her standard depends the manners and morals of her country.

Lecturing the other day at the Sorbonne on the subject of national virtues Mr. Roosevelt observed: "A nation's chief blessing was that it should leave its seed to inherit the land. No refinement of life, no delicacy of taste, no material progress, no sordid heaping up of riches, no sensuous developments of art and literature can in any way compensate for the loss of the great fundamental virtues, and of these great fundamental virtues the greatest is the race's power to perpetuate the race."

Considering we are a dominant race, that we possess the greatest empire the world has ever seen, that we plant our stock all over the world and lay the foundation of the capacities of future millions of the human race, to no other nation is the question of improvement more important. It is possible that even with a stationary population a race may continue to hold its own, provided its stock be sound and physically and mentally vigorous, but it cannot survive if diseases such as insanity, epilepsy, and imbecility are rampant in its midst.

As long as man was speechless he advanced no faster than other animals, but with speech, writing, and printing, came the transmission of acquirements in a special sense, and these would produce traditional or acquired progress. The past education of a mother will not enlarge the brain of the infant, but she can teach her child what she has learnt and so the child can begin where she has left off. A dwarf can see further than a giant if he sits on a giant's shoulders, yet he is a dwarf and the other a giant: any schoolboy knows more than Aristotle, but the schoolboy is a dwarf, and Aristotle a giant. If the race degenerates, the time will come when its heritage is too great for it, and neither battleships, Free Trade nor Tariff



Reform, nor anything else will save it. The bigger the empire, the stronger must be the race; the larger the superstructure, the stronger must be the foundations. The citizens must be healthy, thrifty, sober, industrious, and patriotic. Their virtue must not be of the cloistered idealist kind; it must be full of virility and vigour, ready to face the rude shocks of a tempestuous world, always prepared to defend itself against aggression by trained, effective, and remorseless force. The man who is too tame to become a soldier, the woman who is too self-indulgent to become a mother are no worthy citizens of a great empire. Hardness of heart is a great evil, softness of head a greater. That which I wish to point out is that so long as the natural man increases and multiplies, so long will peace and industry necessitate a struggle for existence as sharp as any that ever went on under the *régime* of war. About every hundred seconds a new claimant to a share in the common stock of maintenance presents him or herself among us. At the present time the produce of the soil does not suffice to feed half its population; the other moiety has to be supplied with food which must be bought from the people of food-producing countries. We desire nothing but that which is in itself innocent and praiseworthy—the enjoyment of the fruits of the earth and the reward of industry—and lo! in spite of ourselves we are in reality engaged in an internecine struggle for existence with our presumably no less peaceful and well-meaning neighbours.

However shocking to the moral sense this eternal competition of man against man, of nation against nation, this state of things does exist. How can we help to prevent the crowding of men, women, and children into dens wherein decency is abolished and the most ordinary conditions of healthful existence are impossible of attainment, in which the pleasures within reach are reduced to bestiality and drunkenness, in which the pains accumulate at compound interest in the shape of starvation, disease, stunted development, and moral degradation—in which the prospect of even steady and honest industry is a life of unsuccessful battling with hunger, rounded off by a pauper's grave? This is the riddle of the Sphinx, and every nation which does not solve it will cease to exist. I take it to be a mere plain truth that throughout Great Britain there is not a single large manufacturing town which is free from a

vast mass of people whose condition is exactly that described, and from a greater mass who, living just on the edge of the social swamp, are liable to be precipitated into it by any lack of demand for their produce.

If we are able to get away from the busy haunts of men and the din of machinery, and visit the lonely sea-shore or lie on the quiet moorland, tented by the blue sky and draped with the horizon, or sit in the silent glade of an extensive forest, we are ready to think that here, at any rate, is peace. Yet we can rest assured that in every one of the sacred temples of life there are to be seen the blood-red footprints of the same murderous competition. Arguments can hardly be needful to make it clear that no society, in which the elements of decomposition are thus swiftly and surely accumulating, can hope to win in the race of industries. Intelligence, knowledge, and skill are undoubtedly conditions of success; but of what avail are they likely to be unless they are backed up by honesty, goodwill, energy, and all the physical and moral faculties that go to the making of manhood, and unless they are stimulated by hope of such reward as men may fairly look to? What dweller in the slough of want, dwarfed in body and soul, demoralised and hopeless, can reasonably be expected to possess these qualities?

Any permanent development of the productive powers of a nation must be based upon a social organisation which will secure a high amount of physical and moral welfare to that race, and I do not believe that a stable society made up of healthy, vigorous, instructed people would ever run any risk of falling through hideous misery and degradation to utter ruin, for they would be so highly equipped that they could safely be trusted to find ways of holding their own (Huxley).

Now, how does this affect us? I believe we are travelling fairly rapidly in the direction of the fall, and this I consider is mainly due to the fertility of the unfit. Most persons agree that there should be no breeding from lunatics, epileptics, habitual criminals, idiots, imbeciles, and other mental defectives. Some hold that natural selection would prevent a race being contaminated, but as this law, which would remorselessly sweep away the unfit, is not allowed normal sway, it cannot be relied upon, and the only true alternative is compulsory segregation in colonies with rigid separation of the sexes. A plan which

might be adapted would be compulsory notification by medical men of all cases of mental deficiency to some authority created to deal with such cases, and these could then be very readily classified: the more degraded to colonies for life; the others, not being criminal, might be given the choice of segregation or sterilisation. I hold no brief for sterilisation, but after mature consideration I am convinced that if segregation is adopted voluntary sterilisation should follow. Many of the high-grade type of feeble-mindedness are capable of earning their own living under favourable circumstances, although, perhaps, not of competing on equal terms with their normal fellow beings, and if they have no vicious or criminal propensities why should they not be allowed to try. Their only danger to the nation would be their probable inability of producing healthy children. Think for one moment of the cruel injustice which would be meted out to these unfortunate cases by locking them up for life in colonies, even of the most beautiful type of the Garden City. Would any of us hesitate as to the choice? The enormous power which religious and quasi-religious customs obtain over a community is illustrated by every tribe and nation throughout the world, and if the vital importance of preventing the race from being contaminated in its mental and physical conditions was branded into the minds of our youth with all the fervour that springs of religious convictions, it is more than probable that the degenerates would themselves insist upon operative measures.

If closing the flood-gates through which has poured a devastating torrent of degraded humanity be not adopted, the only other plan is to favour the increase of good stock. If having and rearing children is a private matter, then no one has a right to revile small families; if it is a public service, then the parent is justified in looking to the State to recognise that service and offer some compensation for the worldly disadvantages it entails. Parents capable of producing healthy children and possessing the requisite knowledge to train them into useful citizens should be endowed, for the most precious gifts citizens can present to their country are healthy, robust, and vigorous children. Modern conditions conspire to put a heavy handicap upon parenthood and an enormous premium upon the partial or complete evasion of offspring, and that is where the clue to the trouble lies. Our social arrangements

discourage parenthood very heavily, and the rational thing for a statesman to do in the matter is not to grow eloquent, but to do intelligent things, to minimise that discouragement. People who spend £100 a year on a child should have a large proportion of it returned, and those who spend 5s. a week should be treated in a similar manner. There should be a special tax, and each social stratum would pay according to its prosperity, and the childless people of each class would pay for the children of that class (Wells).

The Government has made a beginning and discriminated in the incidence of income tax on small incomes in favour of parents. This action might safely go much further, and a scheme might be adopted exempting from income tax all money spent in maintenance and educating families of good stock, and this would tend to throw some of the additional financial burden on those who escape this national form of service. In past days wealthy men founded almshouses and hospitals for the old and weak, and why should we not hope in the future for endowments for healthy and capable parents, who could be chosen by trustees who should look solely to the probable quality of the offspring? Something in this direction is commonly but unconsciously done by many great landowners, whose employments for man and wife, together with good cottages, are given to exceptionally deserving couples. The advantage of being connected with a great and liberally managed estate being widely appreciated, there are more applicants than vacancies, so selection can be exercised. It might well become a point of honour for wealthy families to gather fine specimens of humanity around them as it is to procure and maintain fine breeds of cattle (Galton).

The State might honour and reward those in all ranks of life who produce healthy and able children, instead of penalising as at present the reproduction of the best elements of the people, and assuring the burdens of those alone who are least likely to give birth to useful members of society. The duty of the State to support the falling has been so much emphasised that its still more important duty to the able and competent has been obscured, yet it is they who are the real national asset of worth, and it is essential to secure that their action should not be hampered and their value sterilised by the jealousy and obstruction of the failures. The incompetent have to be supported partially or wholly by the competent, and for their own



good it would be worth while for the incompetent to encourage the preponderant reproduction of the abler and more successful stocks, as it is only where such stocks abound that the nation is able to support and carry along the heavy load of incompetence kept alive by modern civilisation.

There is plenty of good stock in Great Britain and Ireland, and an appreciation of its value and of its necessity to the nation will force us to find ways of encouraging its reproduction and checking that of the evil strains. We must learn to honour those who, sound in body and mind, bring up well a large family, and not less those who avoid marriage for fear of perpetuating their own infirmities. A man who will not earn his own living, a woman who neglects her household and refuses to perform her maternal duties, and a nation which will take no thought for the morrow, must all be classed among the failures of civilisation (Whetham).

A novel experiment is now being made in the town of Schonberg, about two miles south of Berlin, a favourite residence of the Anglo-American community having business in that capital. The municipality has lately instituted a system of bounties for such of its employees as are the fathers of large families. The experiment is made on distinctly eugenic lines, since those fathers who are the most steady, healthy, and efficient men are to be preferred. The scale of bonuses is as follows :

In addition to their regular wages the heads of families of three children will receive an extra monthly payment of 10s. 2d., for four children 12s. 6d., for five children 15s. 1d., for six children 17s. 6d., for seven or more £1. These bounties will be paid only to fathers whose children are under sixteen years of age and who can produce satisfactory evidence that the children are entirely dependent upon them. Payments begin with the first day of the month in which the man enters the municipality's employ and end when the man's service is over. If the workman leaves during the month payment will be made for the entire month. Contrast the practice largely adopted in England, as appears from the advertisements in the press, of giving a preference to "no encumbrances" over a sound, steady man with a healthy wife and family. It will be interesting to watch the experiment, for if successful the precedent will probably be contagious.

In France, where the birth-rate is steadily falling, it is pro-

posed to impose extra military obligations on all bachelors over twenty-eight years of age. Men who do not serve the State in the capacity of fathers of families should, it is argued, be made to compensate for this in the national defence. Another suggestion is that all healthy civil servants should be compelled to marry at or before the age of twenty-five. As the salaries of young civil servants are not in many cases sufficient for the support of families, it is proposed that increases be granted in proportion to each man's family, and that men who have at least three children should receive preference over seniors with smaller families when promotions are made.

Parents should grasp that when they have given birth to a new citizen, this involves on the one hand a duty towards the community in respect of his health, mental and physical, and a claim on the other hand of the parents on the State that the latter shall make the conditions of life favourable to the rearing of healthy, mentally vigorous men and women. Gladstone defined as the noblest work of the statesman that which is done to raise the standard of public health, and Ruskin stated that the veins of wealth are purple, and that the divine intent of all wealth is the production of a sturdy race (Karl Pearson).

To the medical profession as a whole public opinion entrusts the welfare of the race, and through this welfare the destiny of the nation, not only for the present but also for the future, and proper attention by us to prevent evil conditions will have a profound effect in reducing the gravity of the problems which the physician, the sociologist, and the statesman of the future will be called upon to solve.

I do not for an instant intend to question the righteousness of the endeavours of civilised man on behalf of his afflicted brothers; one cannot but admire the beauty of the unselfish spirit which prompts his action, but it is right to point out that by these means disease is propagated, the contamination of the race assured, and the care of useless citizens made a very heavy charge on the community. Pity is the highest and most exquisite of human emotions, and surely it teaches that the *prevention* of suffering is more noble than its *creation*.

(<sup>1</sup>) Lieut.-Col. Hill-Climo.—(<sup>2</sup>) These statistics are extracted from the *Family and the Nation* (Whetham).

*The Viscosity of the Blood in Epilepsy.* By R. DODS BROWN, M.D., M.R.C.P.E., D.P.H., Senior Assistant Physician, Royal Asylum, Edinburgh.

### 1. *Historical.*

IT is only within the last few years that any serious attempt has been made to investigate the viscosity of the blood and to find out what importance, if any, could be attached to the variations in the fluid friction of the blood in health and disease. Prior to this period a few physiologists did pay attention to this subject, but many of their results have been ignored on account of the difficulty encountered by the coagulation of the blood. Defibrinated blood or blood to which an anti-coagulator had been added was used in later investigations.

In 1896 Nicolls, working with defibrinated blood, confirmed the results of Ewald, who stated that the blood viscosity was about five times that of water. In the following year Lewy gave the value as three and a half times that of water. It will be noticed later that the results of different authorities vary considerably.

Denning and Watson carried out an elaborate research, and they stated that an increase in the number of the corpuscles causes an increase in the viscosity, and that certain chemical substances increase it, while others lessen it.

Hess found that the mean viscosity value in healthy individuals was 4.5 times that of water, with a tendency at the extremes of life to be less than in the middle-age periods. This is confirmed by Bachmann, who thought that nourishment and exercise caused changes in the blood.

The researches of Weber and Watson show that the number of erythrocytes is not without influence. Rotky, on the other hand, is not of the same opinion, and the works of Bence and Determann confirm this. The latter states that the changes are due not to the number but chiefly to the size and form of the corpuscles, which hold substances which determine the degree of viscosity under different circumstances. Osmotic tension between them and the plasma is also important.

Determann showed that when the blood is laked the viscosity is greatly increased. This is due to the corpuscles being destroyed and the viscous substances being set free. The variations in the viscosity of the serum are much less than those of the blood.

Venous blood is more viscous than arterial blood, and that is thought to be due to an increase in the size of the corpuscles, to their giving out their highly viscous substances, and to their taking up  $H_2O$  from the plasma.

$CO_2$  passed into blood-plasma makes very little difference in the value of the viscosity.

Rotky, Hirsch and Beck found the mean average viscosity value to be 5.1, but they took the blood from a vein. Bence put the value at 5.4, and Determann at 4.7 in men and 4.5 in women.

Hess states that the results obtained by these observers are too high, and that the hirudin they used to prevent coagulation retards the flow of blood.

Neither in the specific gravity nor in the hæmoglobin count is there a safe analogy of the inner friction of the blood, although Blanschý says that if the percentage of hæmoglobin be divided by the viscosity value it gives an indication if a pathological condition is present. The result, he says, should be between 17 and 21 in a normal person. The viscosity is not affected by the blood-pressure.

## 2. *Viscosity in Some Morbid Physical Conditions.*

In pneumonia the viscosity is lower after the crisis than before it, and this has been ascribed by some to the  $CO_2$  in the blood, but it has been pointed out that frequently it is much higher in mild cases than in severe cases. Oxygen inhalations have been found to diminish the value of the fluid friction in these cases, and in one observed by Ferrari there was a great lowering of the viscosity without a decrease in the number of the corpuscles. Sodium iodide, however, had been given to this patient for two days.

In chronic interstitial nephritis the viscosity values are low, and this is due to hydræmia which is present.

Rotky found in a case of acute nephritis an increase both of the blood and of the plasma. This he thought might be due to waste products circulating in the blood.



Naturally a considerable amount of work has been done in blood diseases, and it has been found that in most cases of anæmia there is a definite lowering of the viscosity, but the red corpuscles do not always show a corresponding reduction in number, nor is there a constant lowering of the plasma viscosity in these cases.

Where there is a very high leucocyte count, as in cases of leukæmia, the viscosity is raised, but Bence was unable to find any increase in a case of leucopænia during the leucocytosis of digestion.

In jaundice the fluid friction value is high, and in cases of heart disease with valvular lesion it is raised when the patient is allowed out of bed.

Graham Brown carried out a series of observations which show that with a rise of temperature the rate of the flow of blood is increased. He accordingly suggests that "a febrile temperature may be considered as a boon to the organism in that it will either allow the blood to circulate faster or it will save the work of the heart."

There is no uniformity of opinion as to the viscosity before and after food.

It is of interest to note what Fano and Rossi pointed out that removal of the thyroid gland brought about only a slight increase in the viscosity, but when the parathyroids were removed the viscosity rapidly increased. They assume that this property of the blood is normally affected very largely by the internal secretion of these glands.

### 3. *Viscosity in Epilepsy.*

From what has been said it is evident that there is not known any one factor which influences the blood viscosity. It has been suggested by some that toxins, metabolic or otherwise, may play an important part in its value, and as epilepsy is considered toxic in origin it may be interesting to note what is found in this disease.

The viscosimeter which I used is that invented by Hess, and is described in the appendix.

With the assistance of Dr. Scott Watson a series of observations was carried out almost daily for several weeks on fifteen

cases of epilepsy, on thirty-five cases of various forms of mental diseases, and on six members of the staff, *i.e.*, a total of fifty-six, twenty-nine of whom were males and twenty-seven females.

These were done in the wards and the temperature of the room never varied more than a few degrees, so that this had no influence on the reading of the viscosity.

Table I gives the average reading of the different diseases.

TABLE I.

*Showing Average Viscosities in Fifty-six Cases Examined.*

15	cases of epileptic insanity	.	.	.	.	4.8
2	„ general paralysis	.	.	.	.	4.4
9	„ melancholia	.	.	.	.	4.3
13	„ dementia præcox	.	.	.	.	4.2
1	„ mild delirious insanity	.	.	.	.	4.2
3	„ simple mania	.	.	.	.	4.2
5	„ secondary or organic dementia	.	.	.	.	4.1
2	„ delusional insanity	.	.	.	.	4
6	„ healthy persons	.	.	.	.	4.2

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In 46.6 *per cent.* of epileptics viscosity was from 5 to 5.9.

In 2.4 *per cent.* of all the other cases viscosity was 5.3.

Of all these diseases epilepsy was the one which gave the most interesting results. Its mean viscosity value was 4.8. While seven of the fifteen cases gave results varying from 5 to 5.9, only one of all the other cases examined—*i. e.*, forty-one in number—had a viscosity higher than five times that of water. In other words, 46.6 *per cent.* of epileptics had a viscosity above 5, and only 2.4 of all the others gave a similar result.

Moreover, not only was the blood value in these epileptics high, independently of fits, but it was very evident that it rose to a very high level prior to a fit in very many of these cases, although not in all. This is seen in Table II.

TABLE II.

*Case I.*

Average viscosity	.	.	.	.	.	.	4.4
45 minutes before a fit	.	.	.	.	.	.	5.7
20 minutes after fit	.	.	.	.	.	.	5

*Case II.*

Average viscosity	.	.	.	.	.	.	3.8
2 hours before severe fit	.	.	.	.	.	.	4.9

*Case III.*

Average viscosity	.	.	.	.	.	.	4.4
11 a.m.	.	.	.	.	.	.	3.7
2 hours later and just before fit	.	.	.	.	.	.	4.5
1 hour later	.	.	.	.	.	.	4.1

The viscosity value was highest in those epileptics in whom the seizures were most severe and most frequent. Indeed, in those patients who had a very occasional fit it was only slightly higher than that of a healthy person. That this condition was not dependent on the bromide which was administered to the epileptic patients was proved, because if the drug were stopped the viscosity remained high even after many weeks, and because the same high value was not found in other classes of patients to whom was given a similar dose of bromide.

Although a large series of blood-counts was made I have not been able to observe any connection between the number of the red or white corpuscles, or the hæmoglobin and the viscosity, or between it and the blood-pressure.

I examined the blood of only two general paralytics, and found the average to be 4.4, but in one of these it was as high as 5.8 about half an hour after a congestive seizure.

In regard to cases of dementia præcox, I have not been able to observe any noteworthy facts in the different types of the disease. In this the rate of flow was 4.2 times that of water.

It is of great interest to find that among the cases of mania and melancholia the viscosity was highest in those who were acutely ill, *e.g.*, the average reading in the former class was 4.2, and the two patients who exhibited the greatest degree

of mental excitement gave average results of 4.5 and 4.6 respectively. The mean among the melancholiacs was 4.3, but 4.6 and 4.8 were the viscosity values of those whose condition was most acute.

In these cases, also, blood-counts were made, but the number of the corpuscles did not appear to influence the viscosity results.

#### 4. *Conclusions.*

It seems to me, therefore, from the examination of the blood of these fifty-six cases, that one is justified in affirming that in epilepsy there is present in the blood some factor affecting its viscosity, and that this is absent from the blood of other cases, or is present in a much smaller amount. The most probable explanation, I think, is that this is a toxin, bacterial or metabolic, circulating in the blood, and this is in conformity with the view held by many regarding the causation of this disease.

This toxin, it will be noted, then, is present in the blood of epileptics to a far greater extent than in any other class of case examined; that it is most abundant in those suffering from frequent and severe fits; and that the toxicity of the blood increases to a very marked extent prior to the onset of a seizure.

#### *Description of Instrument.*

Two parallel glass tubes A and B of unequal length are fixed to an opalescent glass stage C, and though open and separate at one end, at the other they are connected by a U-shaped piece D, which joins them at right angles to the stage upon which they lie.

To this U-shaped piece there is fixed a rubber tube P, which is attached to a rubber ball K by means of a glass joint S. This glass piece has an opening N, which can be closed by one's finger, and so by means of the bulb suction is obtained.

Thus it will be clear that whatever pressure the bulb exerts acts equally on both glass tubes; but the apparatus has a stop-cock F near the longer of the two tubes, by which it can be shut off from the pressure of the bulb, which then acts only on the shorter tube, *i.e.*, on the one used for blood. The longer tube is used for water.



For a little less than a third of its length tube A is graduated, as is also tube B. The graduation begins at 0 in both tubes and at exactly the same level. In the tube for water, *i.e.*, tube A, the graduation extends up to 8, each unit being divided into tenths.

In tube B, however, it is carried up to 2, and only the first unit is subdivided into a quarter and a half. The mark 2 of the blood tube corresponds to 4.3 on the water tube.

The calibre of these two tubes is not the same throughout. In tube A the finest bore is found in the middle third, while in tube B the non-graduated portion has the smaller lumen. Between the two tubes is placed a thermometer M for registering the temperature of the air at the time the observations are taken.

There is a metal clip H for holding a capillary blood tube R.

#### *Modus Operandi.*

Pure distilled water is used for these observations. Some is taken into a small glass tube, and with the stop-cock vertical is sucked up to mark 0 of tube A. The stop-cock is then turned horizontally, so shutting the water tube off from the action of the bulb. Some blood is now taken from the finger or ear of the patient in the special capillary tube, whose funnel-shaped end is placed against the free end of tube B and is held there by means of clip H. The blood is immediately sucked up to mark 0. Now both blood and water stand at the same level. The stop-cock is opened, thus allowing both fluids to come under the influence of the bulb. Blood and water are then sucked up until the blood reaches the mark 1. The level at which the water stands indicates the viscosity of that specimen of blood.

It is only after much practice that accurate results can be obtained, and great care is required to prevent coagulation of the blood in the tube.

#### BIBLIOGRAPHY.

- Lewy.—*Arch. Physiol.*, Bonn, vol. lxx, 1897.  
 Denning and Watson.—*Proc. Roy. Soc.*, lxxviii, 1906.  
 Hess.—*Deutsch. Arch. f. klin. Med.*, Leipzig, xciv, 1908  
 Bence.—*Deutsch. f. klin. Med.*, Berlin, lviii, 1906.

- Determann.—*Idem.*, lix, 1906.  
 Hirsch and Beck.—*Deutsch. Arch. f. klin. Med.*, lxix, 1901.  
 Blanschky.—*Dissertation*, Zurich, 1908.  
 Burton Opitz.—*Journ. of Physiol.*, xxxii, 1905.  
 Burton Opitz.—*Journ. of Exper. Med.*, 1906.  
 Graham Brown.—*Edin. Hosp. Report*, 1894.  
 Ferrai.—*Arch. di Fisiol.*, i, 1904.  
 Fano and Rossi.—*Idem.*, ii, 1905.

*A Clinical Study of Anæsthesia, Mental Confusion, and Moods, in Epilepsy, Confusional Insanity and Hysteria.* By LEONARD D. H. BAUGH, M.B., Ch.B.  
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MANIFESTATIONS of anæsthesia, mental confusion, and moods are frequently met with in general medicine and psychiatry. Their occurrence is not confined to pathological states; in normal people it must be studied in the domains of physiology and psychology. It is by no means always easy to differentiate the physiological from the pathological, or in psychology the normal from the abnormal. This difficulty in demarcation has tended to render investigation arduous and the findings imperfect.

In dealing with the subject from the clinical aspect, the avenues of approach and the paths explorable are limited; more markedly is this the case when observations are carried on amongst the alienated.

In this study consideration is concentrated on the phenomena observed in epilepsy, confusional insanity, and hysteria, as a degree of relationship appears to be present, and, it is hoped, will be demonstrated. The interest of the study, the careful observance of manifestations, and the relationship referred to, are the only justification for such a paper as is here submitted.

The disturbances of sensation are not limited to regional anæsthesia, but in many, owing to the mental state, the reaction to a painful stimulus (pin-prick) is the only reliable test. The variations are striking. While in confusional insanity the same altered state lasts for days or weeks, in

epilepsy and hysteria the changes may be sudden and of short duration.

Prodromal anæsthesia, although often present, cannot be said to be constant in epileptics; it may be that in some it is transient, or limited in extent, and has been missed. It disappears in several a few minutes after the epileptic discharge. When associated with serial epilepsy it appears to be more constant as a prodroma, and often persists for a considerable time after the fits have ceased. It has been noted that some cases have shown the rapid disappearance of analgesia after a single fit or other epileptic discharge, and the slow regaining of pain perception after a series.

Muskens (1) has drawn attention to the disappearance of the disturbance in sensation after an epileptic discharge, usually abrupt, but not necessarily a fit, and suggests the desirability of directing the discharge along the least harmful lines. In 1908 it was stated (2) that prophylactic treatment by large enema minimised tendency to serial fits; since then in these observations it has more than once been found that where analgesia was present sensation returned, without the occurrence of fit or jerks, after the bowel had been washed out and the patient kept in bed and given milk for a day.

It has occasionally been observed, particularly in one female patient, E. F—, that prodromata—analgesia, etc.—have disappeared after the manifestation of a psychic equivalent.

The following extract shows well this point:

E. F— was well and had all her sensations on the 15th, and that night slept from 10.30 p.m. She, on the 16th, wakened without any jerking, etc. Before breakfast at 8 she appeared sulky, complained of headache and dimness of vision; eyes were glassy; right eye showed internal strabismus; analgesia was complete. Until 10 she worked well, then refused to tidy and showed irritability. On the charge nurse's attempting to tidy her, E. F— scolded, then sat and cried for a little; she was left alone but closely watched. At about 11.30 she seemed brighter (got up and appeared about her normal), and had no recollection of scolding nurse, of whom she was very fond. By 5 p.m. all her sensations had returned. She then continued well until, on the 23rd, prodromata, anæsthesia, etc., were noted at 9 a.m.; these culminated in a series of ten fits at 5.15 a.m. on the 26th.

The manifestations of epileptic discharge, which vary from fit state to phenomena purely psychic in character, are easier of explanation, if one recalls C. Besta's (3) conclusion—that the manifestations are the result of an irritant, mechanical or toxic, acting on the central nervous system, and to which the nerve-centres react independently of one another. The extract from E. F—'s case showed an extreme form of confusion, *viz.*, amnesia. Amnesia and other symptoms of confusion favour the contention of a toxic irritant, as much of the research recently done has tended to show that confusional insanity is, speaking generally, the result of toxins acting on more or less unstable nerve-cells.

The association of disorientation or other phases of mental confusion with anæsthesia is as typical of hysteria and many confusional insanities as it is of epilepsy. An attempt to ascertain if there is any definite relationship in this association has been made. There appears to be an association, but I do not feel competent to explain the connection, and the number of observations made do not warrant a definite statement. It may be said, in the cases examined a relationship was present, both in regard to the development of, and emergence from, the symptoms of analgesia and mental confusion.

In cases of epilepsy and hysteria anæsthesia was, time and again, evident before the onset of confusion ; usually, but not so constantly, sensation was regained before emergence from the confused state. Confusional insanities have come under treatment when both symptoms were established, but two chronic exophthalmic goitre cases, at the time of relapse, have shown alteration of sensation previous to becoming confused. In another thyroid case in whom there are numerous alternations of the mental state, there is anæsthesia before torpor and during transient delirium, and after the latter, marked general hyperæsthesia and intense hallucination. As a rule, in acute confusional cases analgesia disappears before the confusion does. In some, after sensibility to painful stimuli is regained and during the period of slow mental clearing, formication and other variations of abnormal sensation are present, and appear to form the bases of hallucinations. These variations (formication, etc.) sometimes persist for a while after mental clearness has been re-established and the hallucinations are forgotten or can be laughed at. In these observations anæsthesia was oftenest



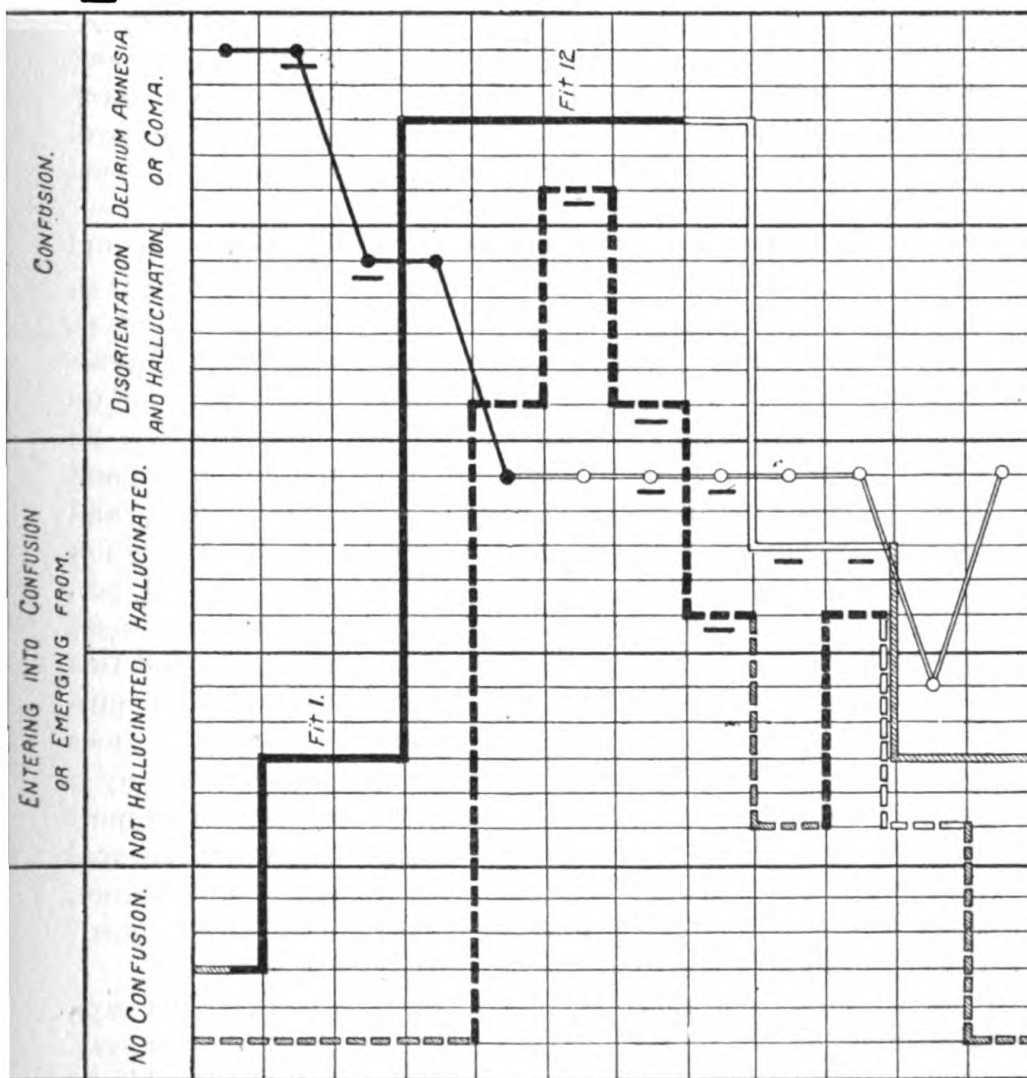
evident amongst the cases of confusional insanity in whom auto-intoxication, possibly metabolic, appeared largely causative. The association of hallucination with analgesia and confusion, although frequent in confusional insanity, has not been found to be as constant as Stoddart (4) stated.

The incidence of moods of an obsessional type has been observed in cases of epilepsy and hysteria. This incidence occurs while they are analgesic and confused. Hallucinations, obsessional in character, appear in some acute confusionals. The occurrence of these hallucinations appears analogous to the moods noted in epilepsy and hysteria, and I have come to regard them as the equivalent of a mood.(5)

The following chart indicates the general relationship existing between the phenomena that have been under consideration. The confusional insanity is charted from the second day of delirium (post-febrile of measles) when she was admitted; the rash was then fading and the urine loaded with albumen. The hallucinations were at times obsessional; history, elicited afterwards, substantiated the impression that they originated from a remote, intense, suppressed "complex."(6) The persistence of altered sensations lasted about ten days more than the chart shows—in other words, nearly all through the period of slow, gradual emergence from confusion into mental well-being. The epileptic (G. G—) illustrates well pre- and post-fit analgesia; at her normal she is alert, a good worker, and can differentiate sensations. In the hysterique (Mc. G—), when well, no sensory anomalies could be detected. In some cases of profound confusion moods seem to be the only incidents remembered after recovery; this feature has been noticed in both confusional insanity and epilepsy. In hysteria the repetition of the same mood, usually a repetition of, or a conversion from, some dominant impression, is sometimes a good illustration of the defence resistance of Freud (6); an analogy to this has been noticed in two obsessively hallucinated cases of confusional insanity.

A somnambulistic state (Janet termed it "deliria") was on several occasions manifested by A. C. S— when under observation for over two years. A certain mood always preceded the state in which she re-lived two days. Those around were called by names taken from that period of the past, and she was anæsthetic, hallucinated, and oblivious to everything else. She conversed freely in response to hallucinatory stimuli, and

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appeared frank up to a certain point, and then resistant and reserved. This phase of defence resistance was never really overcome, although other phases could as a rule be interpreted and relieved. Curiously, hepatic disorder from metabolic upset (? is it a constitutional predisposition) often seemed to fill the *rôle* of "mechanism of symbolisation," which led to the mood antecedent to the state. In the mood, to still further adopt the language of Freud and Janet, "censure" broke down, "repression" was lost, and then the deliria of Janet (7).

Before concluding, some opinions arrived at by various writers should be referred to. That a definite cause is often not assigned is not a matter for surprise, for the vagueness of the subject and the difficulty of interpretation are very soon realised when such a study is attempted.

The conclusions of Bouchard (8), Krainsky (9), Voisin and Peron (10), Bruce (11), A. Turner (12), Clark and Prout (13), and Besta (3), with regard to epilepsy, and of Macpherson (14), Bruce (11), Gilmour (15), Orr (16), G. Turner (17), Korsakoff (18), and Soukhanoff (19), Giachetti and Pilcz (20) on mental confusion, to refer to only some of the workers, all point to a toxæmia. Many points from those referred to, and from personal observations (21) on confusional insanity and epilepsy, suggest that the *rôle* of metabolism in the production of these phenomena is on many occasions of importance. That in many there is hereditary nervous instability must always be recollected. Kauffmann (22) has suggested that this factor from heredity leads in epileptics to the excessive production of such substances as indoxyl, and that they at times act as toxins of metabolic origin. Kauffmann's (22) theory is worthy of consideration, and some clinical observations support it. Mental confusion, the outstanding feature in confusional insanity, is accepted as a symptom which, if not resultant from, is at least always associated with, toxæmia; the frequent association with it of analgesia is at least suggestive.

In hysteria the opinions of Freud (6), Janet (7), Sollier (23), etc., are really not as antagonistic as at first sight they appear. The remark about nervous instability is equally applicable to hysteria, and certainly the association with metabolic deficiency seems borne out in some. There is no desire to draw deductions from the statement of this juxtaposition; such a step, in the light of our present knowledge, would be open to the charge

"*circulus in probando*," but current literature on the subject shows a gradual tendency to no longer regard the manifestations of hysteria as purely psychic in origin. So far we have no explanation of what is "constitutional predisposition," and it is only by observance that we can learn.

In conclusion, I must thank Dr. Parker, the Superintendent of Gartloch, for freely affording me facilities for carrying out observations, and must express my appreciation of the interest shown and the care taken in work outside the routine by certain members of the past and present staff.

It is hoped that the study, despite, so to speak, dealing with only the fringes of the subject, has shown, however imperfectly, the relationship of the phenomena, and that the paper has not been devoid of interest.

#### REFERENCES.

- (1) "Prodromal, Motor Sensory, and other Symptoms," *Epilepsia*, fasc. i, 1909.
- (2) "Observations on Insane Epileptics," *Journal of Mental Science*, July, 1908.
- (3) "Research on Blood-Pressure, etc., in Epilepsy," review, *ibid.*, April, 1907.
- (4) *Mind and its Disorders*.
- (5) *The Changes of Mood in Epileptics*, Aschaffenburg, Halle, 1906.
- (6) Brill's Translation of Freud's *Selected Papers on Hysteria*.
- (7) "L'hystérie maladie mentale," *Congres Amsterdam*, September, 1907.
- (8) *Auto-intoxication*, trans., 1894.
- (9) *Mémoires Courounés*, 1901.
- (10) *Arch. de Neurol.*, vol. xxiv.
- (11) *Studies in Clinical Psychiatry*, 1906.
- (12) *Epilepsy*, 1907.
- (13) *Amer. Journ. of Insanity*, vol. lix, No. 2, 1902.
- (14) *Mental Affections*, 1899; *Morison Lectures*, 1905.
- (15) "Mental Symptoms of Exophthalmic Goitre," *Journal of Mental Science*, October, 1909.
- (16) Discussion on (15).
- (17) "Alcoholic Insanity," *Journal of Mental Science*, January, 1910.
- (18) Quoted by J. Turner, *ibid.*, October, 1903.
- (19) "Contribution to Study of Sensation in General Paralysis," abstract, *ibid.*, July, 1906.
- (20) "Meynert's Amentia," abstract, *ibid.*, January, 1909.
- (21) "Confusional Insanity," *Brit. Med. Journ.*, October 14th, 1905, and "Observations on Epileptics," *Journal of Mental Science*, July, 1910.
- (22) "Beiträge zur Pathologie des Stoffwechsels bei Psychosen," *Die Epilepsie*, Jena, 1908.
- (23) "Hystérie et Sommeil," *Arch. de Neurol.*, 1907.



*Treatment of Mental Excitement in Asylums.* By  
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I HAVE been asked by the President to open a discussion on the "Treatment of Mental Excitement in Asylums." The subject is a very important and practical one, and goes to the root of many of the most difficult problems connected with the management of the insane. Of cases of mental excitement in asylums it may be said, "they are always with us," and the manner in which they are treated and the success attending their treatment may be taken as tests of the good management of an asylum. The difference between the state of the madhouses of the past and of the mental hospitals of the present day is largely the result of better methods of dealing with it.

I shall endeavour to treat the subject in as practical a manner as I can, but I must begin by subjecting mental excitement to analysis. It can be divided into two kinds. There is on the one hand the mental excitement which is directly due to disease, as of the person who suffers from acute mania. This is a primary or essential excitement, a symptom of disease, and it runs a course which corresponds in intensity and duration to the morbid process. It is a more or less continuous form of excitement, and it is amenable only to those kinds of treatment which have an effect on the disease. There is, on the other hand, the mental excitement which is a reaction to some irritation in the environment acting upon excitable patients. This excitement is secondary and non-essential, it is temporary in character and paroxysmal, and with the removal of the irritation it exhausts itself and naturally subsides. The obvious treatment for this secondary excitement in excitable patients is preventive.

Although these two forms of excitement met in asylums are on analysis so different, yet in practice the distinction is easily overlooked and suitable treatment cannot then be adopted. For example, if an excitable patient be kept in an irritating environment, the reactions may follow one another so closely, that there is apparently continuous excitement. The symptoms may thus be regarded as mainly due to mania and be treated

by sedatives, which under these circumstances would not be good treatment. On the other hand, it may not be realised that in cases of acute mania the patients are excitable as well as excited, and that a part of their excitement, the exact proportion depending on their environment and treatment, is a reaction to irritation, and is not an essential symptom of the disease. There is no doubt that the better treatment given nowadays to cases of acute mania as compared with the past is the chief reason why the disease now appears to be of a milder type than in the past. A large part of the excitement in former days was mainly a reaction to the harsh and irritating treatment the patients then received, and naturally this has disappeared in consequence of the removal of the exciting cause.

The practical importance of the distinction I have drawn is seen to be very great when one comes to consider the details of treatment. The treatment of the essential excitement of mania is directed towards the disease, and consists of remedies and measures which influence the morbid process, such as the use of sedative drugs, of baths, and of rest in bed, and of general treatment, such as tonics, nourishing food, fresh air, and moderate exercise, which improve the general nutrition and enable the patient to throw off the disease. The treatment of secondary excitement in the excitable, on the other hand, is, as I have already said, mainly preventive. It is, of course, true that excitability may be a direct symptom of active disease, just as primary excitement is, and in these cases its treatment should be on similar lines, but in asylums excitability is usually found as a fixed mental attribute in a considerable proportion of our patients. The rational treatment of excitement in those cases is, therefore, not to attempt the impossible by removing a brain quality, but to guard the possessor of a brain with defective powers of self-control from all sources of irritation.

I intend in the first place to refer briefly to the treatment of mental excitement, which is a direct symptom of such diseases as acute mania, agitated melancholia, and delirious insanity. In these diseases sedative drugs are often employed, and as their use is condemned by some, the advantages and disadvantages of their employment may be mentioned. It is admitted by all that their employment is undesirable, and that

when used for their sedative effects, it is on the principle of the choice of the lesser evil. It is also admitted that they are liable to abuse, that they should never be given at the will of nurses or attendants, and that their effects should always be supervised by medical men. They should never be administered in increasing doses with the object of completely controlling all signs of excitement, but they should be used merely to tone down the symptoms within manageable or safe limits, and they should only be administered for short periods to tide over a dangerous or acute exacerbation. With these precautions I have not hesitated to employ sedatives, but there are some who totally abstain from doing so. It appears to me that the toxic theory of the causation of insanity which is now being so widely accepted does not support a policy of abstention, for if there be a circulation in the blood of toxic agents acting injuriously on the brain, surely it is in accord with the fundamental principles and practice of medicine to administer an antidote, either chemical or pharmacological.

The prolonged bath at the temperature of the body is a most useful calnative, and it has none of the objections alleged against sedative drugs. It is a mistake to suppose that it is dangerous or has a debilitating effect, as it tends to raise the blood-pressure, and in imagining these evils, as some do, they are confounding it with a hot bath, which is relaxing and distinctly dangerous if prolonged.

Rest in bed has also a calming effect in acute mania. The bed treatment of the acutely insane has many advantages which it is impossible to refer to at the present time, but there is no doubt that by its suggestion of rest and invalidity and by its physiological effects on the nervous system and blood-pressure, it has a distinctly calming influence on acute excitement.

All measures directed to improvement of the general health of the patient act indirectly on excitement by tending to shorten the course of the disease. Attention has to be paid to digestion and the alimentary tract, to the appetite and the supply of a sufficiency, but not an excess, of simple nutritious food, and it may be necessary to administer tonics and constructive drugs. Sleep has also to be obtained, and in the acute stages of the disease it may be necessary to have recourse to hypnotic drugs. These should not be given for more than two nights consecutively, and they should be constantly varied

so as not to establish a drug habit. In the less acute stages it will be found that exercise and life in the open air all day long favour sleep and are usually sufficient to produce it.

I now pass to discuss in greater detail the measures for the prevention of secondary excitement, or in other words, the management of irritability and excitability. This is a much more important problem than the treatment of the essential excitement of disease. In the first place the number of excitable patients in an asylum is greatly in excess of those who are continuously excited from disease, and it is probable that the latter do not amount to more than 3 *per cent.* It is difficult to guess the proportion of the former, but this much may be said, with truth—it has been very much under-estimated in the past. Mental nurses are warned, and are fully aware from personal observation of the marked irritability and excitability of epileptic patients. A greater or lesser degree of this irritability exists also in large numbers of patients suffering from other mental disorders, and if these were only treated with the same caution and tact that is bestowed by nurses on their relations with epileptics, the amount of excitement in asylums would appreciably diminish. In every asylum this preventable excitement is in excess of what it should be—and in the past it was very largely so. If a well-directed attempt be made to grapple with this problem the reward is great, and the benefits follow so speedily that the relationship of cause and effect is obvious to all. The lines of treatment are not so purely medical as in the case of excitement from disease, and it is to be feared that medical men have not interested themselves so much in them. The subject is, however, too important to be handed over entirely to the nursing staff, and if thoroughly done will test to the utmost the originality and resource, the powers of observation, and the knowledge of mental disease and of human nature of any medical man.

I desire to point out in the first place that the sources of irritation to excitable patients are innumerable. In this respect the volume of excitement that may result in a mismanaged asylum reminds one of a mighty river, for like the river, it may have its origin in a thousand different little sources. It is thus obvious that success in the prevention of this mass of excitement cannot be effected by one measure alone, however heroic. Human nature always craves for “a



Royal road to success," but in this instance, as in most others, we find that success is attained by persistent attention to many details.

Since the days of Gardiner Hill and Connolly much has been done to ameliorate the lot of the insane, and by removing causes of irritation these measures have largely reduced the amount of preventable excitement in asylums. This work is not complete, and we must carry it on with greater thoroughness by attending to details and refinements unthought of, and, indeed, impossible to our predecessors. Innumerable ways in which the feelings of excitable patients may be spared will occur to any thoughtful observer who studies the habits and environment of his patients, and the following are some important points which I think worthy of consideration.

One of the worst manifestations of excitement is noisiness, and it is not sufficiently realised and acted upon that noise in an asylum is as infectious as measles in a preparatory school. One noisy patient in a full ward will in a few minutes excite two or three others to be nearly as noisy as himself, and a day of noise will try the nerves and exhaust the self-control of everyone, with the exception of the deaf and demented. It is therefore necessary to start a crusade against noise if one desires to abolish excitement in an asylum. Even shouting out requests or directions by the staff should not be permitted, and I have to record that I came to regret the day when I had furnished every ward in the Stirling District Asylum with a piano, on account of the exciting influence of music as usually played in an asylum. Now what should be done with a noisily excited patient? He, or as is more often the case, she, should at once, without a moment's delay, be removed to a room where she cannot disturb her excitable fellow patients. Such a case should be placed in seclusion, so that in the quiet of retreat she may calm down, and when segregated she may not inflame the excitement of others. She should, of course, be treated with special consideration, as any insult or tactlessness in this condition would only add fuel to her excitement and provoke resentment, which would make her future control more difficult than formerly. There should therefore be attached to every ward where there are excitable patients a small sitting-room, called a seclusion room, simply furnished, but with specially comfortable chairs, where an excited patient

could come with a nurse, or, if she preferred it, without this companion, who should nevertheless be at hand. It may be necessary to have more than one room of this kind in connection with some wards. Anyone who desires to read of the beneficial effects of seclusion in the noblest language ever written on this subject by a physician, may do so in the pages of Connolly. Connolly obtained the advantages he mentions by locking up his patients and by placing them in bare, unfurnished bedrooms. This "locking up" is quite unnecessary, as I know from a very extended experience, and very much better and more lasting results can be obtained by removing all such indignity from the practice of seclusion. The surroundings of "seclusion" should be more, not less, pleasing and comfortable than the ordinary wards, and there should be no trace of anything penal in the measure, but the reverse. When calmness is restored the patient should return to the ward in no spirit of rebellion, or with a bitter feeling of having been wronged. A moral stigma may be allowed to be present, for this is of value in increasing the self-control of the patient if there be any self-respect present.

Some may imagine that to provide special nurses for all excited patients enjoying the effects of seclusion is an impossibility. In many instances they may be dispensed with, and if the seclusion sitting-rooms be conveniently situated, suitable observation of the patients can be maintained without difficulty. Moreover, if the prevention of excitement be systematically carried out, the number of cases actually excited among the excitable becomes very small and can be overtaken.

The treatment of the noisily excited, who are so from acute insanity, must be carried on in a slightly different way. Seclusion prevents their excitement becoming aggravated, but it does not calm down in an hour or two or a day at most as in the case of the excitable. I have known such an acute case sing "The Lord's my Shepherd" for three days and nights on end practically without a break. Such excitement is not of a preventable kind, and these cases require the provision of a series of apartments where they may be segregated, and where suitable observation and treatment of the disease they labour under may be carried out day and night by a specially numerous staff. I believe that in the past the night treatment of these patients has been very defective.

Owing to the fact that much of the excitement found in asylums has not been recognised to be preventable, little trouble has been taken to find an external cause for it with the object of removing the exciting cause or of avoiding it in future. If one found, for example, a patient excited, and was told that she was an epileptic, that was too often assumed to be a sufficient explanation of the whole condition. Inquiry should not, however, cease here, for a careful investigation will often be rewarded by an explanation from which a valuable lesson for prevention in the future can be learnt. I remember on one occasion an epileptic woman being so excited that she broke a large pane of glass and occupied a seclusion sitting-room for nearly a whole day before her excitement calmed down. I could make nothing out of her story, as she derived more satisfaction from abusing the nurses than in assisting me in making a careful analysis of what had actually happened. I found out afterwards that she had started the day very well and had been sewing. She had then asked a nurse for some coloured ribbon and was told it was to be found in a particular place. She said it wasn't and the nurse said it was. She then asked the nurse to look for it and was told to find it herself. The language then became less polite, and culminated in an attack of excitement, lasting, as I have said, nearly a day. With improper treatment and with a sequence of irritations it might possibly have lasted a week. Tact here on the part of the nurse at an early stage would have prevented this excitement altogether, and the more carefully one inquires into the history of these occurrences the more numerous do these cases of preventable excitement seem. If the lesson they teach of the evil consequences of want of tact on the part of officials could only be thoughtfully applied to the management of every excitable case, excitement would be greatly reduced. This may be a doctrine of perfection, but much more could be done than is done at present.

In cases of excitement where the patient is confused, demented, or imbecile, the task of finding out the exciting cause is more difficult, but it should nevertheless be regarded as a duty, for even in these cases, although apparently hopeless, much of the excitement is preventable. Attendants and nurses, for example, often make a mistake of holding confusedly excited cases too much. These cases do not under-

stand why they are being held, but they instinctively feel, as a wild animal would feel, that they are in the grip of an enemy. They therefore continue struggling, so long as they are held, till they are exhausted, whereas, if they be left alone, they are often too confused to do anything purposeful. Sometimes it is a delirious idea which is the cause of the excitement. An assistant of mine was once called to four nurses who were holding a struggling woman. He found out that the patient thought she was in her own house and that all the gas taps were open, and that they were in imminent danger of an explosion. He told her he would go and see, and, coming back in a few minutes after, informed her that all the gas burners were turned off and that she might go to sleep in safety. The patient slept and gave no more trouble that night.

Patients suffering from dementia and imbecility can give no help in investigations of this kind. In this respect they are on a level with infants who cannot talk, and, as it is usually found that a restless and crying infant is suffering discomfort, so demented and imbeciles are noisy and restless from similar reasons. I have known a noisy imbecile become quiet when the decayed stumps of his teeth, which had apparently caused neuralgia, were removed. Another patient was very noisy every night, and nothing that was done by the nursing staff with the object of soothing her had any effect whatever. The night superintendent by chance one night offered her a biscuit and thought she snatched it rather greedily. She gave her more and she was quiet that night, and afterwards she got a regular supply of biscuits at night and continued quiet. I must assume that this patient felt the discomfort of hunger, and expressed her feelings in noisy cries as an infant would have done in similar circumstances. We made a lucky discovery in this case, but how many other cases of preventable excitement from a similar cause have been overlooked and misunderstood. Even when the cause cannot be found in these cases, it may be possible by expedients of various simple kinds to diminish excitement and noise. Every charge-nurse, especially on the female side, should have a supply of sweets for this purpose, while on the male side the tobacco-pipe becomes literally "a pipe of peace." Troublesome females, too, have been pacified by giving them rag dolls to nurse. Occupations are,



of course universally recognised to have a quieting influence, and I think it is Dr. Clouston who records the history of an insane tinsmith who was a most unruly and violent inmate till he was allowed to expend his energy by hammering tin in the workshop. For six days in the week he was now a useful and peaceable man, but on the seventh—the day of rest—he relapsed into habits of violence and pugnacity and became a “flaming tinman” again.

Another source of preventable excitement in asylums is the incompatible position sometimes taken up by patients and young attendants to one another, which inevitably leads to trouble if not rectified. Most patients naturally resent being kept in the asylum, since they consider themselves sane, and it is galling to them to receive orders from anyone. Some young attendants, on the other hand, enjoy a sense of authority, and are inclined to order the patients under their charge to do things in a somewhat peremptory manner. If examples of these two classes come together there is sure to be friction and trouble, and the interesting point about it is, that each thinks he has been wronged by the other, and is unconscious of his own wrongdoing. If one investigates an unfortunate incident between the two, the attendant affirms that the trouble began because the patient refused to do something, and struck him, and that he, the attendant, had to defend himself. The patient's story of the aggression always goes a stage further back than that of the attendant, and he states that the attendant ordered him to do something as if he were speaking to a dog, and as he could not stand this kind of treatment he naturally retaliated. The antagonistic attitude of the two is the underlying cause of the trouble, but the tactless language of the attendant is the exciting cause. Were it less peremptory, as is usually the case when experience has been gained, then many of these violent incidents would be avoided. In these cases the attendant who has unconsciously erred requires to have it gently explained to him that the incident would not have arisen had the patient not been irritated by his manner and tone.

Violent assaults on the part of irritable male patients resulting in the use of an unnecessary degree of controlling force by the male attendants are the features of excitement on the male side which give rise to most anxiety to asylum administrators.

It is not too much to say that nine-tenths of the really serious incidents (excluding suicides) which the authorities have to investigate are of this nature. With the general improvement in efficiency which has taken place by the training of the staff, by more reliable supervision, and by higher ideals of care and treatment, violence of conduct has diminished very greatly in recent years. To my certain knowledge no single factor exerts a more powerful influence in restraining this violence and intemperate language than the presence and influence of female nurses in the male wards. That this should be so is only what one would naturally expect, and this is the reason why during seventy years innumerable but only partially successful attempts have been made to employ women in this manner. This system has now been successfully inaugurated by the superintendents of the Scotch asylums, with the warm approval and encouragement of the Commissioners in Lunacy. They are chiefly employed in nursing the sick and infirm, but suitable acute cases are in most asylums placed under their charge as well. The honour of being the first, however, to employ women in male wards, as far as my reading goes, belongs to an Englishman, a most interesting man, Dr. Samuel Hitch, the "First Secretary and Chief Organiser" of our Medico-Psychological Association, when he was Superintendent of the Gloucester General Lunatic Asylum in 1841. I was lately informed by his widow that he was led to do so because of the harsh manner in which male attendants were then disposed to treat the patients. This statement is confirmed by the minutes of the Asylum, in which it is recorded that the first woman was employed in the "refractory ward," and she was the wife of the charge attendant of the ward. It is sometimes said that the male side of an asylum is not a suitable place for women. If that be so in the present year of grace then the sooner a change in the habits and organisation of the male side takes place the better will it be for the patients treated there. The statement has, however, been absolutely disproved by our experience in Scotland.

There is one more point I must refer to, and that is the education, or, to be more accurate, the re-education, of our unrecovered patients after the acute stage of their illness has passed away. In the old days a patient who had become demented steadily deteriorated in his habits because he was

neglected and left to himself. In the course of time many of these—the chronic inmates of our asylums—became very degraded, and very troublesome and disorderly. They formed a considerable proportion of the excited cases, and they were the source of much irritation to others. They are now a steadily diminishing band, as unrecovered patients are now closely supervised and their insane tendencies are checked at the beginning before they are formed into habits. They are, moreover, re-educated into habits of decency and good order, and in course of time the best of these patients can be safely boarded out with guardians in the country. If this policy of re-education be steadily pursued, it checks the source of the supply of many of the most excited and troublesome patients to be found in asylums.

Gentlemen, the subject the President has asked me to discuss is an important one, and goes to the very foundations of asylum management. It is also a very extensive one and there is much that has been left unsaid. I have omitted, for example, the well-known fact that large wards are unsuitable for excitable patients; and that abundant elbow-room is a most potent agent in producing quiet. I have, however, brought together some points which I consider of importance and which may form the basis of your discussion. Of these I would emphasise two: In the first place, that the greater proportion of the excitement found in asylums is of the preventable kind; and secondly, that this excitement can be prevented by removing its cause.

#### DISCUSSION,

At the Annual Meeting held at Edinburgh in July, 1910.

The PRESIDENT said all would agree that the paper was an admirably practical one. If any member wished to discuss the treatment of excitement by means of drugs the meeting would be pleased to hear him.

Dr. BRISCOE said the paper which had just been presented by Dr. Robertson was a most interesting one and the subject appealed to every psychological expert. He wished to ask Dr. Robertson whether there was anything in the colour treatment of excitement. At some of the asylums he had been into the windows were painted primary red, blue, or yellow. He believed that in England the Commissioners approved of yellow.

Dr. CLOUSTON said he proposed to follow the President's hint and limit his remarks to one definite branch of the treatment of mental excitement, namely, the treatment by drugs. In other respects he would not differ from Dr. Robertson's thesis. He thought there was a distinct field for the treatment of mental excitement by pure therapeutic measures. If one was treating a patient at home in a private house, it was his experience that the use of sedative drugs was compulsory. The question then arose as to what drugs should be used; what was the effect of

the continuous use for a month or two, or three months, of certain sedative drugs on the explosive condition of pathological excitement? He thought he could speak with some certitude on that aspect of the subject. No doctor who had to treat a case in a villa or even in the country could allow the patient to be noisy or to attract public attention. Sedative drugs were then used to control the excitement in such a way as to take the edge off the symptoms and to diminish the duration of the excitable period. He could say with some dogmatic force that there were some cases in which one could use sedative drugs, especially in combination with warm baths, in such a way as to control excitement and limit the duration of the attack. What drugs were best in this respect? He came back to his old thesis, as the result of a great deal of experimenting in the earlier days, and said that one must use the bromides in nearly every case, but not alone. To bromide of potassium he gave the preference. Bromide of sodium was not so reliable a sedative, but that and bromide of ammonium could be employed to a limited extent. Bromide of potassium should be used in combination with certain other sedative drugs. Sulphonal might be used with it and the dose should be reduced to below ten grains. Some people wholly condemned sulphonal, but he thought they were quite wrong in doing so. He had kept scores of senile cases with delusional excitement out of asylums by the use of, perhaps, thirty grains of bromide and four to seven grains of sulphonal combined, given twice a day, the last dose at night, and with no bad effect on the nutrition or in the formation of a drug habit. The next best drug to combine with the bromide was veronal. One did not yet quite know its risks; it played tricks with one sometimes; but thirty, or even up to sixty, grains of bromide combined with five to ten grains of veronal would produce a sound, refreshing sleep, which was quite free from any traceable disadvantages. Trional had received a bad name, but it did not deserve half as bad a character as it received. Should one continue with the same combination always? No; change to trional, still using the bromides; change to veronal, to sulphonal, giving them for two or three days at a time. Bromide was a cumulative drug, but if its effects were watched bad results would not ensue. He had treated cases not by the day and week only, but by the month, and those cases had improved in weight, got a better expression in the face, they could be got out into the fresh air, and many had recovered, not necessarily directly because of the drug treatment, but he was satisfied that the recovery had been hastened by keeping down the excitement and preventing fresh attacks of it. The morbid reactivity of the mental cortex was diminished by bromides. One could get bromides circulating in the blood just as in the case of the epileptic, and with no bad result in regard to recovery. With regard to sleep, he adhered to his view that paraldehyde was the best pure hypnotic. With good nursing and attention to the general health one could obtain by drug treatment a good result in a certain number of cases without any of the destructive effects which some people spoke of.

Dr. DRAPES said that Dr. Robertson's paper was an admirable one, as it gave the leading thoughts on which the hearer could act at once. He was well able to confirm his opinion as to the effect of the absence of tact, and the occurrence of noisy conduct on the part of attendants in increasing the amount of excitement in a ward. He had found attendants shouting at patients, and he had told them not to do so, and showed those attendants that by talking quietly the patients themselves became quieter. With regard to seclusion, he thought it was unfortunate the Commissioners put in their reports so many hours' seclusion for this patient and that, because he regarded it as a slur upon asylums. ("No.") Seclusion was a remedial measure, and had a good effect upon the patients, as well as relieving patients in the wards. An excitable patient often upset other patients. He had been very glad to hear what Dr. Clouston said, because when that gentleman spoke in the morning he seemed to have almost forsaken his original optimism as to treatment by drugs. But as one got older one lost faith somewhat in drugs and trusted more to general hygienic measures. But too great stress could not be laid on Dr. Clouston's experience; he knew of no more reliable opinion than Dr. Clouston's. He used veronal largely at his asylum, and found it an admirable drug; rarely had he found unpleasant effects. No mention had been made of hyoscine. That had been condemned for many years, but, he considered, unjustly. When there was sudden excitement the effect of hyoscine was immediate, *i.e.*,  $\frac{1}{150}$  gr. of it. With  $\frac{1}{4}$  gr. morphia and  $\frac{1}{100}$  gr. hyoscine he had



seen patients quieted rapidly, with practically no after-effects. Noisy demented were some of the most trying of all cases.

Dr. BEDFORD PIERCE hoped that reprints of portions of Dr. Robertson's paper would be available for circulation amongst the staff of our hospitals for the insane. His views of the best way of managing excited patients would be of great value if widely known by nurses. When a new edition of the handbook is required he hoped that Dr. Robertson would be asked to write a chapter on the subject somewhat on the lines of his paper. With reference to the drug treatment of excitement it pained him to say anything in opposition to Dr. Clouston, but he thought the other side of the question required to be stated. Bortham Park, York, was managed by an apostle of the doctrine that drugs should not be used merely to quell excitement, and Dr. Hitchcock had for many years preached and taught that drugs were useless and even harmful in dealing with excited patients. That institution was one of the quietest and most orderly he knew. Much the same practice was followed at "The Retreat," sedative drugs were very little used, and he thought the results justified the procedure. On *à priori* grounds, one could see that the cure of acute mental disturbance was a process of repair. The drugs in question were known to lessen protoplasmic activity; and one could fairly infer that anything which lessened protoplasmic activity would lessen the process of repair. He would not go as far as Dr. Hitchcock and say such drugs were never useful; but he thought that in asylum administration very few should be employed, and great caution should be observed in regard to them.

Dr. HAYES NEWINGTON said that in order to be thoroughly useful the discussion of the subject required dividing up. One needed to consider the stage or time of the case. What was good for reducing the excitement of the chronic case might be dangerous in the acute case. As to bromide, it was a dangerous drug indeed, the most insidiously dangerous drug there was, and one did not always see what followed its administration. He had always had a dislike to the old-fashioned means of reducing excitement in recent curable cases, Dr. Skae's teaching being that they tended to protract the acute stage. Opium and antimony were especially tabooed, but in regard to the latter he had in his colleague's practice seen remarkably good results from it in old-standing cases,  $\frac{1}{4}$  gr. two or three times a day; it was particularly good in cases of excitement which had recurring attacks every few months. Those cases then not only became quieted by day, but the drug predisposed to restful nights.

Dr. OSWALD said the Association was very much indebted for such a practical paper, and especially for having it pointed out that mental excitement was divisible into two classes—one preventable, and the other not. The lesson which he had learned from Dr. Robertson's paper was that every effort should be made to get at the real cause of the excitement. The tendency when a patient became excited was to have recourse to drugs to subdue that excitement, without ascertaining, and therefore without removing, the underlying cause, which might or might not be a removable one. He had been very glad to hear Dr. Robertson speak of seclusion. When he said he put a patient out of the ward because he was excited he thought Dr. Robertson would have used the term "isolation room"; but he was glad he had had the courage to speak of it as a seclusion room. It meant that such excitable patients were put into a separate room in charge of competent nurses and attendants. He thought it was wise to divide the subject into two classes: pathological excitement, to be treated by drugs, and non-pathological excitement. The former could be discussed for quite a long time. He agreed with Dr. Robertson in almost everything he said. Many of the cases of excitement occurring among chronic cases in asylums were preventable. They were due to lack of knowledge on the part of the attendants; irritation was not wilfully caused to patients. With the improved training now received by nurses, excitement had become less frequent, and the whole tone of even chronic cases and wards was now better than it was ten years ago.

Dr. HUBERT BOND said he would like to associate himself with those who had expressed their fascination and admiration at the subject-matter of Dr. Robertson's address. He did not propose to join in the discussion at any length, because of the immense programme, but when he saw Dr. Newington get up he thought that gentleman would speak about certain arrangements with which he (Dr. Newington) was intimately associated, if, indeed, he were not the actual prompter, at the New

Sussex Asylum. There a detached hospital formed a feature of the plans, and he knew Dr. Newington was instrumental in arranging for the design of several rooms, on the lines urged by Dr. Robertson, namely, to set aside people who were actually excited, either from a pathological cause, or a purely irritative one. He would ask whether Dr. Newington could say what had been the result of those rooms. There were many things in the paper which deserved full discussion, but the programme was so lengthy that he contented himself with asking that question.

Dr. NEWINGTON said he could not answer Dr. Bond's question, except to say that Dr. Taylor found the rooms were very useful for the purpose of separating off excitable patients.

Dr. MACKENZIE (Inverness) expressed his thanks to Dr. Robertson. He was glad to hear him lay such stress on the value of seclusion and solitude. Seclusion rooms were important and interesting, but they involved structural alterations, for which suitable arrangements did not exist in many asylums. An alternative arrangement was to have a small day dormitory to which such excited patients might be removed; and if it had three or four rooms opening out of it that would be an additional advantage. He had had an experience bearing on the point at the Aberdeen Royal Asylum, where there were three wards recently constructed, female wards containing a hundred patients, who had formerly been in much smaller wards, and subjected to considerable overcrowding. There had been considerable excitement of the kind which Dr. Robertson had described as preventable. He found that the removal of twelve or fifteen excited patients to the dormitory, where they rested during the day, was of great assistance, and caused the wards to be much quieter. Dr. Robertson did not refer to work and exercise as a sedative. He regarded that as one of the best means of controlling excitement, especially if the employment were out of doors. He was not competent to say much about the effect of drugs, but he found that the addition of whisky to the sulphonal was often very beneficial. With regard to hyoscine, in impulsive, wild, uncontrollable excitement his practice was what Dr. Draper alluded to as his, to give one-hundredth of a grain, with one-sixth or one-eighth of a grain of morphia. Those drugs combined produced a quietening of what was otherwise uncontrollable excitement, and very often gave the patient a sound sleep, from which the patient awakened very much better. With regard to Dr. Robertson's remark as to the effect of having pianos in the ward, he, Dr. Mackenzie, had not found the same result from the music in Inverness. As Dr. Robertson had an infusion of the Celtic element in the Morningside Asylum, he might try the effect of the national instrument.

Dr. SEYMOUR TUKE desired to say a word as a representative from the south, to express the delight with which those from the other side of the Border had listened to so many papers and so many well-expressed opinions from their brethren in the north. He could assure the latter that the eyes of those in the South were turned very much towards them just now, expecting a good deal of hard work and practical results. Most of the matters dealt with in Dr. Robertson's paper were as familiar to those in England as household words, and they did try to act up to the spirit of Dr. Robertson's paper. He was very pleased that the author had laid stress on the open treatment, in which he, the speaker, was a very firm believer. He had very often seen cases brought from single care and from confinement in lodgings, which immediately improved when taken out of themselves and placed in the open air. There was also general physical repair and much better sleep. In his asylum they did not talk of seclusion rooms, though what they did came to practically the same thing. An excitable patient was always removed, if possible at once, from the room where the other patients were; there was often an immediate amelioration in the patient's condition when that was done. He would congratulate Dr. Robertson very much on his paper, which he, Dr. Tuke, regarded as the most practical paper of the Session. One always felt so much the importance of practical papers in the Association; there had been somewhat of a tendency in the last ten years to lose sight of the clinical side of the question of insanity. But the Association was really founded as a practical body for the discussion of the best means of ameliorating the lot of the insane. Perhaps he spoke in regard to that matter feelingly, because he had a kind of link with the past; the blood of Connolly ran in his veins, and he had been brought up in his best traditions by his son-in-law.

Dr. STODDART said he wished to give his support to the reader of the paper. He was very pleased to accord it, not only *à propos* of removing all causes of excitement from excitable patients, but also as supporting Dr. Robertson's contention that rest was essential in the treatment of cases of mental excitement, as, indeed, in the treatment of every other kind of mental disease. He would also say a word about the drug treatment. While he supported Dr. Robertson in that, he was not against Dr. Clouston's expressed views. He thought the combination of the removal of the source of the excitement, with rest and a certain amount of drug treatment, was the ideal method. Small doses should be given, not doses which were intended to give a knock-down blow to patients suffering from excitement. As Dr. Clouston had said, the way in which one could secure minimal doses of a drug was by combining it with another. That was the method which he had adopted for some years. Dr. Clouston suggested bromides as the basis of all sedatives, but he, Dr. Stoddart, had adopted other modes of combination—veronal-sulphonal, and so on. There was, however, one drug which he relegated to the veriest limbo of Hades, and that was trional, which he found had a very deleterious effect on patients. For the moment it was a good sedative and good hypnotic for old people, but if one looked through cases which had been given trional for more than a very limited period, it would be seen that they seldom showed any tendency to recover. Moreover, Soukanoff had made certain observations, not ostensibly for discovering anything about the drug, which showed that trional was the most effective agent he could employ for causing desired degeneration of the neurons in animal experimentation. Since he had learned that he had been the more determined to relegate trional to the dust-heap.

Dr. GEORGE ROBERTSON, in reply, thanked those who had participated in the discussion for the manner in which they had received his paper. His object had been to make it as practical as possible. It was not necessary for him to say very much, but one or two sentences were desirable in reference to the points raised. With regard to the colour treatment of insanity, he did not think the Scottish temperament was influenced by colour, though on the more excitable temperaments he believed it had a slight effect. With regard to the use of drugs, many would remember how the meetings, ten years ago, degenerated into meetings in praise of sulphonal, and shortly after that it was found that many of the cases died with hæmatoporphyria. He had seen accounts of cases of the kind on the Continent, and some of them he had himself seen. He felt very averse to using that drug at all. Recently he had not seen reports of deaths after the use of this drug, and if he could be persuaded that there were not harmful effects from its use no one would be better pleased at it, as it was so effective. But, in a general way, the use of drugs was objectionable if the patient could be treated in any other way. Dr. Stoddart had mentioned the important point that trional produced degeneration of neurons in the lower animals, and if the doctor added a poison of that kind to those already circulating there, harm was being done to the patient. A drug which had been much employed for the purpose was cannabis indica; there was no drug so powerful in causing hallucinations, so that the employment of that drug for people who were subject to hallucinations was a very great mistake. With regard to seclusion, he objected very strongly to seclusion as usually employed, namely, locking the patient up into a single room; it was very unfortunate that that beautiful term should be given such a meaning. The benefits of seclusion could be obtained without locking the patient up; there should not be solitary confinement.

### Occasional Notes.

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#### *British Medical Association, Annual Meeting, 1910.*

At the Annual Meeting of the British Medical Association at Belfast last year it was resolved that the scope of the Section of Psychological Medicine should be extended to embrace Neurology. That this was a wise step was clearly demonstrated by the successful meetings of the Section of Psychological Medicine and Neurology held in London on July 27th, 28th, and 29th, under the presidency of Dr. Theo. Bulkeley Hyslop. The papers have gained in interest, and the sectional meetings, formerly rather sparsely attended, were crowded on each day. On the first day, after Dr. Hyslop had delivered an able Presidential Address upon the general philosophy of the subject-matter with which the Section had to deal, being in the main a survey of the various hypotheses which have been advanced to explain the concomitance or connection of mind and body, a discussion upon the "Treatment of Tabes Dorsalis" was opened by Dr. Risien Russell. Convinced that there was only one rational treatment for this disease, and having frequently seen patients who had been under treatment for years but in whom the treatment for syphilis had been altogether neglected, or so imperfectly carried out as to be quite useless, Dr. Russell purposely confined his remarks to anti-syphilitic treatment with the hope of awakening the profession to its importance. As to the method of treatment the speaker had found the best results obtained from mercurial inunction, as carried out at Aix-la-Chapelle. Dr. Russell was followed by Dr. Ferrier, who covered the whole ground of the treatment of tabes—prophylaxis, measures calculated to arrest further degeneration, palliative treatment, and Frenkel's exercise methods.

Dr. Feibes and D. Lievin, both of Aix-la-Chapelle, outlined the methods they employed. They were in agreement that in all cases of tabes, and especially in early cases, mercurial treatment did good, and that treatment by inunction surpassed all other forms. Also both were adverse to intra-muscular injection, on account of the danger of a sudden mercurialism from the accumulation and sudden absorption of mercury in



the gluteal region. Dr. Michell Clarke, on the other hand, and Dr. Gordon Gullan, had both recently employed injections of mercurial salts without any ill effects. Many others took part in the discussion, and there appeared to be a general consensus of opinion that the pessimism with which the mercurial treatment of tabes is generally regarded was unwarranted; that the unfavourable results so far obtained have been largely due to the inadequacy of the methods employed, and that whilst an anatomical cure might be an impossibility, a clinical cure should be attempted in every case.

On the second day a discussion on "Marriage and Insanity" was opened by Dr. Savage. Contrary, perhaps, to the opinion of the lay public as a whole, and to that of most medical men, Dr. Savage contended that insanity need not in every case be a bar to marriage, and that persons who had suffered from mental disorder classifiable as insanity had recovered and married without risk to their partners or children. On the other hand he was of the opinion that, speaking broadly, those with periodic recurrences, epileptics with mental symptoms, those with marked delirium or hallucinations, the sexually perverse or impotent, and, of course, general paralytics, should be debarred marriage. Dr. Shuttleworth, whose experience was drawn from the products of ill-assorted marriages rather than from the contracting parties themselves, said that his own inquiries and those of others had satisfied him that neuropathic inheritance was a far more potent cause of mental defect or disorder than the personal mental condition of the parent, and that in consequence the marriage of neuropaths, and particularly cousin-marriages among neuropathic stocks, should be discouraged. Therefore although, as he supposed, the time was not yet ripe for laws regulating marriage and prohibiting that of the unfit, it was incumbent on the medical profession to do their utmost to educate public opinion on the subject.

Dr. Robert Jones, whilst agreeing that in the main the marriage of people who had been insane was inadvisable, and maintaining that delusional insanity and epilepsy should be absolute bars against marriage, considered that the tendency of nature to the average type should not be overlooked, and that, therefore, the progeny of neuropaths might be normal. In a few thoughtful remarks he referred to the law of Mendelism, and showed how those who applied Mendelism to this problem of

the transmission of abnormal mental characters did not take cognisance of the fact that there was no such thing anywhere in human nature as gametic purity. In consequence dogmatic utterances as to the importance of heredity were not warranted. Indeed, from a study of his own cases he had arrived at the conclusion that heredity was not nearly so important a factor as was generally believed, and that the really important determining factors were environmental influences, alcoholism, and tubercle.

It became evident, as others joined in the discussion, that there existed certain divergences of opinion on this important question, not so much, perhaps, with regard to the undesirability of marriages between insane persons, but, firstly, with regard to the individuals who should be debarred marriage; and secondly, the means of preventing such unions. Therefore, when Dr. Greenlees brought forward a sweeping resolution in favour of the prohibition of marriage not only to insane persons, but also to neurasthenic individuals, seconded by Dr. A. R. Douglas, the resolution was criticised, amended, then whittled down, later referred to Committee, and finally was withdrawn. There appeared to be a general agreement with Dr. Savage that the time was not ripe for legislation, and also that the biological evidences on which dogmatic statements as to the place and importance of heredity in the causation of mental disorder ought to be founded were still insufficient to warrant the recommendation of State interference with marriage. Probably, also, most members present were in agreement with Dr. Savage when he said that the State regulation of marriage might have the effect of reducing society to a dead level of mediocrity, and that he could not help sympathising with the little girl who said that when she got to Heaven she hoped she would find there a little corner of Hell to play in.

The third and last day was made notable by the reading of several capital papers, including a highly original communication and demonstration by Dr. Bárány, of Vienna, upon certain new methods of examination concerning the relationship between the vestibular apparatus, the cerebellum, the cerebrum, and the spinal cord. Dr. Bárány first of all described two methods of examination in the diagnosis of cerebellar diseases, the first investigating the equilibrium of the body, as by Romberg's test, and the second, the pointing movements of the extremities

during vestibular irritation, either when experimentally produced in normal persons or as the result of disease.

Dr. Bárány's paper was so valuable that it should be read in full when published in due course in the *British Medical Journal*, but it may be said here that it consisted essentially of a description of the equilibrative and co-ordinative movements observed in normal persons under artificially produced nystagmus, *i.e.*, by turning or by syringing one or other ear with cold water; an analysis of the neuro-muscular mechanism underlying the production of these same experimentally produced disorders, and a comparison of these with the disorders of equilibration due to disease, whether of the vestibular apparatus, cerebellum, cerebrum, or cord. Dr. Bárány showed that the behaviour of normal persons under experimental nystagmus followed definite rules, and that the departures from these in morbid conditions afforded valuable aids to diagnosis, and in addition threw light upon the function of the neural mechanisms subserving these movements. A brief quotation from Dr. Bárány's paper will give an example of this: "If we cause a normal individual with closed eyes to stretch out his arm and touch with the forefinger an object held in front of him and then draw back his hand and point again at the object, we find that nearly everyone, even the uneducated and children, can, with a small amount of practice, point with accuracy at the object. If we turn a normal individual ten times on a turning chair to the right and arrest suddenly, we observe a strong vestibular nystagmus to the left. If in this moment we repeat the 'pointing experiment,' the man will no more point correctly to the examiner's finger, but point to the right side. This pointing to the side is surely due to a vestibular innervation of the arm muscles. It is only the question from where this innervation comes. Again, I do not wish to tell you all the possibilities which I have discussed in a paper read before the Neurological Association in Baden Baden, 1910. I can only tell you the result of my reasonings—that this innervation comes from the cortex of the hemisphere of the cerebellum. The most important fact which made me assume this hypothesis is, that in two cases of operated healed cerebellar abscess of the right hemisphere, the patient, who did not show any trouble from the standpoint of the neurologist, after ten times turning to the left did not point to the right side with the right hand (the hand of the diseased

side), but pointed absolutely correctly, whereas the hand of the healthy side showed the usual error. I supposed that by the abscess the centre in the cerebral hemisphere was destroyed, which in the normal delivers the desired innervation."

Dr. Bárány's demonstration, delivered in excellent English, was followed with the greatest interest by all present.

Following the reading of Dr. Bárány's paper, Dr. D. G. Thomson again brought forward the necessity for post-graduate curricula and diplomas in psychiatry at universities and other qualifying bodies. After a discussion, in which many members joined, the following resolution was put to the meeting and carried unanimously :

"That this meeting of the Section of Psychological Medicine, assembled at the Annual Meeting of the British Medical Association in London, 1910, believing that it would tend to advance our knowledge of the pathology and treatment of mental diseases, strongly approves and recommends the institution of a post-graduate course or curriculum and a diploma in psychiatry, and further, that this resolution be brought before the Council of the British Medical Association."

Dr. Alexander Bruce then demonstrated a series of lantern-slides illustrative of a sclerosis of the adventitia of the vessels of the spinal cord, associated with multiple (amputation) neuromata in the substance of the cord. The condition had apparently begun as a sclerosis of the membranes in the neighbourhood of the points of emergence of the anterior and posterior roots, from which points it had spread along the membranes and had entered the substance of the cord by the lymphatic system of the adventitia of the vessels, and had extended along these irregularly as far as their ultimate terminations, producing a great thickening of the outer wall, with a connective tissue. The result was a series of areas on the grey and white matter differing from disseminated sclerosis in that the patches of sclerosis contained actual fibrous tissue which had grown in, and were not mere overgrowths of the neuroglia. In addition the lower portion of the cord showed numerous microscopic tumours composed of spindle-shaped cells and medullated nerve-fibres. These were in every instance situated in the adventitia of the blood-vessels and were probably



secondary results of a deflection of some of the anterior root fibres by the sclerotic tissue.

Dr. Edwin Ash having read a paper entitled "The Psychological Treatment of certain Functional Conditions," Dr. W. A. Jolly gave a deeply interesting account of an investigation carried out at the Physiological Laboratory of Edinburgh University, of the knee-jerk and simple reflexes. The object of the research was to record the interval of time elapsing between a tap on the patellar tendon and the beginning of the electrical variation (recorded by Einthoven's string galvanometer) indicating activity of the quadriceps muscle; and to compare this interval with the delay occurring in the case of reflex action of the thigh muscles in response to mechanical stimulation of the sole of the foot. The result showed that the delay in the latter was about twice that of the knee-jerk, and the inference drawn therefrom was that the knee-jerk mechanism involves one spinal synapse or set of synapses, and that the other reflexes mentioned involve two.

Unfortunately, Dr. Jolly's paper was read at the end of a busy meeting, and the time at the disposal of the Section did not permit of the discussion which its value merited.

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## Part II.—Reviews and Notices.

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### *Mesmerism and Christian Science: a Short History of Mental Healing.*

By FRANK PODMORE. 8vo. London: Methuen & Co., 1909.  
Pp. 306. Price 10s. 6d. net.

Mr. Podmore has long been active in these investigations of psychic phenomena, and out of the fulness of his knowledge he has produced a book which gives an excellent account of this interesting and important subject. Mesmer's appearance in the latter part of the eighteenth century, in a period of intellectual ferment, occasioned a new sensation among the idle rich, and crowds of patients flocked to his reception-rooms. These strange scenes formed the subject of medical investigations, and Mr. Podmore gives a very full account of the results and the cases upon which these reports were founded. He concludes that animal magnetism appears to have been especially efficacious in the treatment of gouty and rheumatic affections. An interesting chapter describes the faith healers who had preceded Mesmer and their methods. We find some account of Gassner, Kenelm Digby, Paracelsus, Fludd, and Maxwell, men whose names are familiar to those who take an

interest in the cure of wounds by the power of sympathy and similar occult mysteries. Their influence on Mesmer is set forth, while showing that the spiritualist doctrines found no place in his expositions. His magnetic system was purely a question of matter and motion, skilfully presented to a public who were averse from the mystical teaching already familiar to those seekers after strange gods. The first French Commission of 1784 reported that there was no proof of the existence of the animal magnetic fluid, and emphasised the moral dangers incurred in Mesmer's experiments. However, de Jussien suggested that those operations were directed and intensified by the will, and thus indicated the true scientific explanation. The account of those elaborate and long-continued discussions recorded by Mr. Podmore suffices to give an intelligible understanding of the case as represented by the conflicting parties. It is a valuable *resumé* of much contentious writing conveyed to the reader in an intelligible form. It is impossible to follow out in this brief notice the history of later French commissions of 1825 and 1837, and we can only indicate that mesmerism in England is treated in an impartial and interesting manner. The account given of Elliotson's investigations and opinions, of Esdaile's wonderful series of operations in India, of Braid's clear and convincing expositions, forms a memorable chapter, and awakens old memories. The later history of the subject having been followed out in reference to the Continent and America, the more immediately interesting part of Mr. Podmore's book begins with his consideration of Thomas Lake Harris, whose influence on Laurence Oliphant was of such an extraordinary character, and led him to write that strange book, *Sympneumata*. From Harris it is an easy step to Mrs. Eddy and *Science and Health*. Mr. Podmore points out that those who practised mesmerism were sooner or later absorbed in the ranks of the spiritualists. Thereafter there were two camps—one occupied with hypnotism or suggestion, the other professing mind-healing as sectaries more or less reputable. More than enough has been said of Mrs. Eddy, but if there be anyone who desires to acquire knowledge of this person and her claims he will find here recorded by herself that it is not right to copy her book and read it publicly without her consent, because that is injustice in a holy place. However, Mr. Podmore has dealt faithfully with many cranks, and we do not grudge Mrs. Eddy a niche in his chamber of horrors.

Since this review was written we regret to hear of Mr. Podmore's unexpected death. His long and judicial studies of these mental phenomena made his name widely known, and his place in psychology will not be easily filled.

### Part III.—Epitome of Current Literature.

#### I. Neurology.

*On the Behaviour of the Pericellular Nerve-plexi in some Pathological Processes in the Nervous Tissue [Sul modo di comportarsi dei plessi nervosi pericellulari in alcuni processi patologici del tessuto nervoso]. (Riv. di Pat. Nerv. e Ment., vol. xv, fasc. 6, June, 1910.) Besta, C.*

If the histological findings described by the author in this communication be confirmed by other investigators, they should go far towards re-establishing the supremacy of the neuron doctrine, so strongly assailed in recent years by the researches of Apathy, Held, and Bethe. Employing a modification of the photographic methods of Cajal, Besta claims to have succeeded in obtaining a clear view of the terminal nervous arborisations around the nerve-cells in various parts of the cerebro-spinal axis, and the relations of these to the nerve-cells. He describes the normal cell surrounded by a thick feltwork of very fine amyelinic fibres, many of which terminate in a small knob-like expansion which lies in contact with the cell body. Some of these seem to penetrate beyond the margin of the cell. Corresponding with the processes, but at a slightly higher level, an abundant interlacing of fine fibres is sometimes seen. It is impossible to state definitely whether these fibres form a network or a simple plexus, and whether they assume intimate relations with the cell surface or not. In no case, however, has the author been able to detect any anastomosis with the endocellular reticulum. The difference in behaviour of the nerve-cell and the peri-cellular arborisations under pathological conditions is particularly striking and significant. Avulsion of the sciatic nerve was performed in eighteen rabbits. These were subsequently sacrificed at periods varying from 2 to 120 days and the associated nerve-centres in the cord examined. The nerve-cells were found to be markedly affected, showing various degrees of atrophy and disintegration, whilst the pericellular arborisations and amyelinic plexuses were perfectly normal. The terminal expansions were clearly visible and normally disposed. They were, however, quite detached from the surface of the cells, which were shrunk and atrophied, leaving a space around them occupied by a material of indefinite structure.

In a second series of experiments the author practised occlusion of the abdominal aorta in a number of rabbits, for a time sufficient to give rise to necrosis in the grey matter of the lumbar and sacral regions of the cord. Only exceptionally was the necrosis of the nerve-cells found to be complete. In the first few days after the operation, both cells and pericellular arborisations showed marked alterations, but, even where the nerve-cell changes were not severe, the destruction of the pericellular fibres and terminal expansions was most marked. Ten days after operation, the nerve-cells showed signs of commencing restoration, but the pericellular apparatus remained destroyed. Nerve-cells were seen to present normal or almost normal morphological features notwith-

standing that the terminal arborisations which normally rest on their surface were completely destroyed, whilst the amyelinic plexuses which surround them had in great part disappeared.

From the results of these investigations, it would seem that the nerve-cell and the pericellular apparatus react independently of one another. We can have destruction of the nerve-cell with complete integrity of the terminal arborisations and amyelinic plexus, or, again, extreme reduction of the plexus and total disappearance of the terminal arborisations with persistence of the nerve-cell in almost normal condition. These results are opposed to Held's views regarding the concrescence and continuity between terminal arborisations and nerve-cell and favour the contact idea of Cajal. Besta suggests that certain clinical manifestations for which a corresponding morphological cell-alteration has not been found may find an explanation in special alterations of the terminal plexuses.

J. H. MACDONALD.

## 2. Physiological Psychology.

*A Study of Genius: Poincaré [Enquête Médico-psychologique sur la Supériorité intellectuelle; M. Henri Poincaré]. (Sem. Méd., March 23rd, 1910.) Toulouse.*

Toulouse, who has previously carried out minute medico-psychological investigations on Zola, Berthelot, Dalou, etc., has now turned his attention to Poincaré, one of the greatest of mathematicians and still in the maturity of his powers. Manouvrier, Bonnier, and other specialists have aided in the investigation.

Poincaré's mathematical aptitude appeared spontaneously at the age of eleven. His father, an uncle, and two cousins have, however, attained intellectual distinction, and his maternal grandmother possessed mathematical aptitude. It is noted that his head is large in relation to his height.

Toulouse considers that Poincaré is of neuropathic temperament. He suffers from neuralgias and has subjective visual sensations when fatigued. He is very liable to insomnia and experiences a stable form of coloured hearing. The neuropathic trouble may be dated from severe diphtheria at five; he has also, perhaps, worked excessively.

Unlike some mathematicians, Poincaré has a good memory for figures, and can remember eleven when only heard once. His mental type is auditory, though most mathematicians are visuals. His senses are weak rather than strong. In movements, he is awkward and inferior.

An instructive point in Poincaré's genius is that he is directed by his work rather than that he directs it. He believes in unconscious mental work, and when work is not easy he abandons it. His powers of attention are not great and the oscillations are marked. In his essential mental mechanism he is unstable. His work is spontaneous and automatic, but not easily stopped. He does not work at night in order to avoid insomnia. He makes no plans in his work. Like some other



great mathematicians, he is absent-minded ; thus on one occasion he unconsciously took a wicker cage from a shop-front and walked down the street with it.

In setting forth these and other results of his investigation, Toulouse makes many interesting comments. HAVELOCK ELLIS.

*Hysterical Anæsthesia.* (*Journ. of Abnorm. Psychol.*, April, 1910.)  
*Linenthal, M.*

Hysterical anæsthesia is held by Janet to be due to a contraction of the field of consciousness consequent upon an inherent mental weakness, an inability to synthesise more than a limited number of sense impressions at the same moment. Other observers, notably Breuer and Freud, are diametrically opposed to this theory. They state that in many of their cases they fail to find any inherent mental weakness of the kind described, but that the patients frequently possess strong characters, remarkable will power, and unusually clear and critical minds.

Janet's distinction between the "stigmata" and "accidents" of hysteria cannot be upheld, and his whole conception involves many difficulties. The author considers these various objections at some length, and then proceeds to develop his own theory of the subject.

The hysterical condition has been shown to be due to a state of dissociation—a certain group of experiences is dissociated and forms an autonomous psychical system separated from the personal consciousness. This autonomous system is, however, still capable of functioning, and the phenomena which thereby result constitute the symptoms of hysteria. Every symptom, including the anæsthesia, must have its explanation in the primary traumatic experience responsible for the dissociation.

Anæsthesia will be found in all cases of hysteria where the sensory dissociation existed during the initial trauma. The hysteric is anæsthetic because at the time of the original accident he was unaware of certain sensory impressions which, under normal conditions, would undoubtedly have affected his consciousness. Thus, in a case where the original traumatic experience consisted in a severe fright, there was a subsequent amnesia for the experience in question and a complete left hemi-anæsthesia. It was found that at the moment of the fright the patient had fallen upon his left side. On account of his disturbed psychical condition he had, however, perceived none of the resulting sensations. Hence a left hemi-anæsthesia subsequently remained. The explanation suggested is strongly supported by the fact that, although the original fright episode could be resuscitated by hypnosis, the hemi-anæsthesia persisted during the hypnotic state. The traumatic psychical system therefore exhibits one dissociation within another, the tactual sensations being dissociated from the other elements constituting that "moment consciousness."

A similar explanation may be applied to the limitations of the visual field. BERNARD HART.

*Hysteria and Psycho-analysis* [*Hysterie und moderne Psycho-analyse*].  
(*Psychol. neurol. Wochenschr.*, Nr. 45-50, 1910.) Friedländer, A.

This is a critical review of Freud's psychological theories and methods. In the main a hostile standpoint is adopted, but the author is prepared to recognise much that is valuable and suggestive in the work of Freud and his school. He considers that the original theories propounded by Breuer and Freud in the *Studien über Hysterie* have been most fruitful for the psychology of hysteria, and that the methods of therapeutics founded upon them may be profitably employed in certain traumatic cases. He is definitely opposed, however, to many of Freud's subsequent developments, and regards the latter's sex-theories with dislike and distrust.

BERNARD HART.

### 3. Ætiology of Insanity.

*Dementia Præcox caused by Dental Impaction.* (*Monthly Cyclop. and Med. Bull.*, Nov., 1909.)

The lesion of dental impaction, that is, teeth so angled against their neighbours as to be possible irritants, has been known as an occasional cause of intense pain, but has never before been studied clinically in its other relations.

The writer examined fifty-eight cases by skiagraph, and found this condition to exist in about one-half of these cases. The patients in whom impactions were found suffered from a great variety of nervous disorders, ranging from headache, habit-spasm, restlessness, epilepsy, through insomnia to melancholia and dementia præcox.

Dental treatment in these cases was carried out by removal not only of the impactions, but of all irritation of teeth and jaws, as the irritation caused by impaction differs only in degree, not in kind, from that of other dental lesions. The best therapeutic results were obtained in severe cases of manic-depressive insanity and dementia præcox, and the author is of opinion that, at least a large proportion of these cases are directly dependent on pure irritation, often situated in the teeth and jaws, and are readily curable when dealt with early. Of eight cases seen by him in consultation, in whom thorough dental treatment was carried out, including the extraction of one or more impacted teeth, six recovered their mental health, one at the time of writing was convalescent, and one much improved. Of these patients, five were cases of dementia præcox, of whom four recovered and one was convalescent.

Impaction in these cases caused no local pain, and in few of them pain of any kind. Pain was also absent in many cases due to caries and alveolar abscess, and he believes that the lesions underlying the severe psychoses are usually painless. Dementia præcox, he reiterates, is a product of purely peripheral irritation. As dental irritation is common at all ages, there must occur consequent mental disorders in the young and the very old, varying from the dementia præcox type as

the reaction-mode varies with age. The predominating type of lesion also is determined, he says, by the age of the patient.

The psychoses of senility, when dental in origin, are usually caused by caries, abscess, and exostosis. In children, on the other hand, recent experiment has convinced him that imbecility, whose symptoms run so close a parallel with dementia præcox that a few cases of acute onset have lately been described as *dementia præcociissima*, has as its underlying lesion in many instances impactions, usually multiple, and capable of causing the terrible mental ravages found in this condition.

A. W. WILCOX.

#### 4. Clinical Neurology and Psychiatry.

*Difficulties of Diagnosis between Minor Epilepsy and Certain Hysterical Convulsive Spasms* [*Difficulté du diagnostic entre les crises Épileptiques frustes et certains tics convulsifs hystériques*]. (*Gaz. des Hôp.*, May, 1910.) Cruchet, R.

A case closely simulating minor epilepsy in a boy, æt. 8, is recorded, which was only successfully diagnosed after a long period and watching as an in-patient.

Four diagnoses are discussed: (1) Minor epilepsy, (2) simple tic or spasm, (3) malingering, (4) hysteria.

The following is a description of the attacks: suddenly his eyelids quiver, his eyes turn up, so that only the whites are visible; this lasts for two or three seconds. There was a history of eighteen months. The boy denied all knowledge of what occurred, but he flinched from a threatened blow, never dropped anything that was in his hand, but would upset it over him; attention increased the attacks, which were as many as forty a day. Only one injury was ever sustained. Coaxing, bribery, slapping, bromides, cold and tepid baths were of no effect. Certain occupations, breathing exercises, reading, etc., would bring on the attacks. There were no biting of tongue, incontinence of urine, nor headaches or drowsiness.

Minor epilepsy was finally excluded when the boy admitted that he knew what occurred, though for nearly two years he denied any knowledge of the attacks; simple tics, by the lack of bashfulness about the attacks, and that reading, breathing exercises, etc., did not stop them or control them; malingering by the fact that discovery did not diminish the attacks, attempts to induce other types of attacks failed, and the imitation was too perfect. Malingerers usually make preparations for their attacks. In favour of hysteria was urged that many years ago he had seen a friend in epileptic attacks. Many dolls close their eyes in this fashion. His mother had slight quivering of the lids.

He is being treated by suggestion during normal (?) sleep, and stated to be improving.

M. A. COLLINS.

*Epileptic Auræ* [*Auræ Épileptique*]. (*Rev. de Psychiat.*, March, 1910.) Vallet and Marinier.

Some interesting psycho-sensory and psychic auræ are recorded:

(1) A man, æt. 37. He first hears a well-known musical air, which

is at times all ; at others the words of the song are heard, and then he sings them ; this is followed by a visual hallucination. He sees a herd of goats ; an animal, larger than the others, separates from them, and turns to the left. At this moment consciousness is lost.

(2) A soldier, who had been wounded in the head, saw everything around jump about and get gigantic in size ; he then saw two eyes advance to him, and lost consciousness the moment they reached him.

(3) Balzac records that Napoleon saw a red man taking part in the chief events of his life.

(4) A girl, æt. 22, would say, "Look at those people ; something is going to happen to them." She then fell in a fit.

(5) A man, æt. 35, would say to his friends, "How pale you look ; you are going to fall." At this moment, he turns pale and falls.

(6) A woman, æt. 30, would see herself out in the street trying to get on an omnibus, and apparently jolted over. At this moment, she would fall.

M. A. COLLINS.

*Paroxysmal Tachycardia as an Epileptic Equivalent [La tachicardia accessionale come equivalente epilettico]. (Il Manicomio, anno xxv, No. 3, 1909.) Sacchini.*

The case recorded in this paper is of interest from the clearly epileptic origin of the cardiac symptoms. The patient had been subject from the age of five years to attacks of *grand mal* of the usual type. Owing to progressive mental deterioration he was sent to the asylum when twenty-one years old, and there, some two years later, he was observed to have occasional attacks of tachycardia of somewhat peculiar character. In the attack, which was of sudden onset, the face became pallid and then cyanotic ; the patient appeared extremely distressed and shrieked out, "I am dying" ; he had intense dyspnoea, and his pulse was small, irregular, and so frequent as not to be countable. When this phase had lasted about three minutes, the circulatory disturbance would gradually pass off, the pulse resuming its normal rhythm and the dyspnoea abating. The patient would then smile, rub his head, and ask, "What was the matter ?" He passed water in the attack, and had complete amnesia. In the intervals between the attacks, there were no symptoms referable to the heart, and the most careful examination failed to reveal anything abnormal in that organ. Under the influence of bromide treatment, the paroxysms became rare and eventually ceased altogether.

In a brief discussion of the pathogenesis of the symptoms the author leans to the view advanced by Bellisari, that the tachycardia is due to an arrest of the inhibitory function of the vagus resulting from an irritation of the cortex.

W. C. SULLIVAN.

*Post-operative Insanity [Sulla pazzia post-operatoria]. (Il Manicomio, anno xxv, No. 3, 1909.) Galdi.*

In this paper, after a critical digest of the literature of the question, the author gives a summary of thirteen cases from his own practice in which insanity developed after surgical operations of greater or less severity. A detailed discussion of the clinical evidence leads him to



the following conclusions: (1) A post-operative psychosis does not exist as a clinical entity, the mental disorders which may follow surgical operations being, on the contrary, of very various character; (2) such disorders when arising immediately after the operation are of toxic origin (due to microbic infection, to anæsthetics, to antiseptics, etc.); when appearing some time later they usually belong to the degenerative psychopathies; (3) hereditary or acquired predisposition to insanity is the predominant factor in the production of these disorders, the influence of the surgical operation being merely that of an occasional exciting cause; (4) the seat or nature of the operation does not exercise any decided influence on the genesis of post-operative insanity, and in particular it is not proved that gynæcological operations are specially liable to be followed by mental disturbances; (5) the mental symptoms that develop after the removal of important organs, being due only to the auto-intoxication consequent on the suppression of the internal secretion of the organs, cannot properly be regarded as coming under the rubric of post-operative insanities.

W. C. SULLIVAN.

*Mental Disturbances associated with Ovarian Syndromes* [*I disturbi psichici in rapporto colle Sindromi ovariche*]. (*Il Polyclin. Sez. Pratica*, 1909.) Fornaca, G.

This is a synthetical and critical review of the literature dealing with the various forms of mental disturbance met with at the periods of puberty, menstruation, pregnancy, lactation, the puerperium, and the menopause (normal, pathological, and surgical). Many of the mental syndromes occurring at these critical periods are not related immediately to deficiency or alteration of the ovarian secretion, but due to the intervention of other factors which exercise a more harmful influence on the nervous system, and this is particularly true with regard to puerperal and lactational syndromes. Ovarian opotherapy has been found by many observers to give excellent results in the true ovarian syndromes.

J. H. MACDONALD.

*Ptyalism in Mental and Nervous Affections* [*Dello Ptyalismo nelle malattie mentali e nervose*]. (*Riv. Sper. di Fren.*, vol. xxxvi, fasc. i, ii, 1910.) Benigni.

The author's observations lead to the following conclusions: In mental affections, ptyalism, even when real, has no diagnostic or prognostic importance. It is to be regarded as a secondary symptom, nearly always related to the toxic agent which produces the morbid mental state. In nervous diseases, however, sialorrhœa is a not infrequent symptom, and may have a certain diagnostic and prognostic value.

In both classes of affections, ptyalism has various causes. It may be produced by direct anatomical or toxic irritation of the salivary centre or of the secretory paths in the hemispheres. It may also be due to abolition of the cerebral inhibitive influence, or be brought about reflexly by pathological conditions in some viscera, or, finally, by mental, anatomical, or toxic excitations of the sensory nerves.

J. H. MACDONALD.

*Five Cases of Rumination in Insane Women* [*Cinque casi di mericismo in alienate*]. (*Ann. del Manicom. Prov. di Perugia, Ann. iii, fasc. iv, 1909.*) Fornaca, G.

After repeated chemical examination of the stomach contents in five cases of rumination, the author concludes that the principal causes of the condition are hyper-secretion, and especially hyper-acidity and hyper-chloridia. Rumination does not occur after every meal, but irregularly, after eating too much and too greedily, when the gastric secretion is highly acid, and the food composed mostly of solids. Changes in the mental state of the patient do not influence the act, nor has the latter any influence on the mental condition. Diminution of the absorbing capacity of the stomach and the activity of the gastric movements can be excluded. Administration of drugs designed to lessen the excitability of the nervous system have no remedial effect. Treatment with bicarbonate of soda or other alkalies which diminish the acidity of the chyme brings about improvement, and, finally, cure. Amongst the insane rumination is met with most frequently in subjects who are mentally weakened and lead a vegetative existence.

J. H. MACDONALD.

*Suicide in Hysterical Individuals* [*Il suicidio negli isterici*]. (*Riv. Sper. di Fren., vol. xxxvi, fasc. i, ii, 1910.*) Fornaca, G.

The question whether the attempts at suicide made by hysterical subjects are serious attempts, made with the definite desire to end their days, or if they are the outcome of a desire for attention, publicity, sensationalism, notoriety, etc., has given rise to a great variety and conflict of opinions. The author has studied minutely the clinical, personal, and family histories of 255 cases of suicide or attempted suicide re-admitted to the casual wards of the hospitals at Rome. Of these 62 occurred in hysterical subjects, and were made the object of special inquiry described in this interesting communication. The author arrives at the following five conclusions: (1) Hysterical subjects may seriously attempt suicide with the definite object of ending their existence. (2) The reasons which urge a hysterical subject to suicide are, as a rule, the same as those which influence the ordinary suicide. (3) Long premeditation of the act is uncommon in hysterical suicides. (4) Degeneracy and homonymous morbid heredity are very frequent in hysterical suicides. (5) The majority of hysterical subjects who make a serious attempt at suicide or succeed in the act are hysterical degenerates.

J. H. MACDONALD.

*Antipathy of Unconscious Origin arising from a Dream* [*Antipathie de cause onirique et inconsciente*]. (*Journ. de Psychol., May-June, 1910.*) Kreist, M.

In this paper, the author recounts the case of a man who entertained an increasing animosity towards his wife. He became so cantankerous that she began to consider the question of divorce. The interesting feature of this antipathy consisted in the fact that the patient himself could not understand it, and stated that it co-existed with a feeling of great affection for his wife. It seemed that his irritation was always

more marked on waking in the morning, and towards the evening he often became quite amiable.

Under hypnosis patient related a dream in which his wife told the children that their father was a very uncouth man, and in the dream the couple engaged in a strenuous dispute. Upon waking he forgot the dream, but found everything the pretext for quarrels with his wife. When the hidden cause was revealed to the patient in the waking state his irrational antipathy disappeared.

Such a case throws considerable light upon sentiments and feelings which often appear inexplicable, and indicates that conscious activity may be controlled by unconscious processes of which the personality is unaware.

H. DEVINE.

*The "Paranoia of Governesses" [Le "Délire de Gouvernantes"]*. (*Journ. de Psychol.*, Jan.-Feb., 1910.) Blondel, C., and Camus, P.

Though the existence of a certain paranoic constitution can scarcely be contested, there are not infrequently highly important contributing causes which give the delusions their particular colour. Among such conditions those of a social and professional character occupy an important place.

Among teachers and governesses, systematised delusions display certain special traits which some writers have described under the name "Délire de Gouvernantes" (Gouvernantewahnsinn). Ziehen, analysing the principal ætiological factors of this form of paranoia, mentions especially repeated slights and want of attention, contrasting with a knowledge of actual intellectual superiority. The authors record two cases illustrative of this type of paranoia.

In both cases the fundamental theme is erotic in character. Constrained by their position to an enforced celibacy, but moving in a social environment superior to their own, they are sometimes exposed to the desires and homage of pupils or patrons of the highest rank. The romances they weave, the dreams of love and marriage, are only imaginative in origin, and of necessity frustrated. Hence the vexations, disappointments, and repeated regrets. Their superior attainments give them an exaggerated opinion of themselves, which forms the basis for the development of expansive delusions.

Such individuals are frequently in a false position, neither mistress nor domestic; they are liable to continual affronts. From an absence of regard, and from vexations of all kinds to which they are subjected, even in front of their pupils whom they should command and direct, they feel an irritation which can only reinforce their feeling of hostility and nourish ideas of persecution.

H. DEVINE.

*Examination of the Blood in Dementia Præcox [Blutuntersuchungen bei Dementia Præcox]*. (*Allge. Zeitschr. f. Psych.*, vol. lxxvii, No. 3.) Heilemann.

This examination was spread over two years, and was conducted in 150 cases of dementia præcox. Dr. Heilemann deals with morphological changes and serum examination of the blood.

The existing literature on the subject does not give an account of

any definite result; the findings are as yet, according to Kraepelin, uncertain and many-sided.

The blood used by Dr. Heilemann was extracted from the ear lobe, fixed in methyl-alcohol, and coloured with hæmatoxylin-eosin or with Giemsa solution.

The absolute count of white blood-corpuscles was in many cases somewhat, but not remarkably heightened, a circumstance which, taken by itself, is of little importance. More interesting is the analysis of the white corpuscles and the numerical comparison of their different forms. They are thus described :

(1) Lymphocytes : small (about the size of erythrocytes) round cells composed of large nuclei and only a thin covering of plasma. In some of these the plasma mass is enlarged.

(2) Large mononuclear cells. They are three times as large as the above-named, and have plump, rounded, or horseshoe-shaped nuclei which colour faintly.

(3) Polynuclears or neutrophiles, with lobulated or broken-up nuclei and rich protoplasm (leucocytes in a narrower sense); and

(4) Eosinophiles, which are similar to neutrophiles, but in which the protoplasm is filled with coarse granules which greedily absorb the acid colouring matter.

In comparing the percentages of these different forms with the normal percentages, there was found to be in dementia præcox a notable decrease of polynuclears. In no case did they attain the normal quantities (lymphocytes, 20-25 *per cent.*; polynuclears, 70 *per cent.* or over; other cell-forms, 2-4 *per cent.*), but were in every instance much below normal, in some cases only being found in half quantities. This decrease was accompanied by an increase in all the other cell forms, the mononuclears and eosinophiles increasing with the lymphocytes, and sometimes attaining double their normal quantity. In cases of other mental diseases tested the findings were mixed. Age and sex had no influence in the change of blood condition found. It is not certain, however, whether this change was varied according to different forms of dementia præcox. It is indicated that a high number of eosinophiles generally accompanied catatonic symptoms.

From these discoveries definite blood changes in dementia præcox are an established fact. That these changes indicate a chemical evolution in the system is a near-reaching conclusion. On account of their difference in character it would be useless to compare somatic diseases, which in one direction or another influence the blood-picture in a similar manner to that seen in dementia præcox. On the other hand, the hypothesis of a toxin being present in the blood would explain these changes. Naturally, nothing can be said in regard to the value of the symptom and the rôle it plays in the complete phenomena of the disease. But there is an interesting physiological analogy to the blood-pictures described, to be found in the blood of a young child. In this the lymphocytes are greatly increased, and further, Benjamin has found that the blood of a healthy suckling baby contains up to 14 *per cent.* mononuclears and 7 *per cent.* eosinophiles. As to whether there is any underlying connection in the two cases is a question open for discussion.

HAMILTON C. MARR.



*On the Clinical Value of the Wassermann Reaction in Nervous Diseases* [*Ueber den klinischen Wert der Wassermannschen Reaktion bei den Nervenkrankheiten*]. (*Neurol. Cbl.*, 1910, No. 11.) Springer, H.

After examination of 241 patients, 56 of whom suffered from mental diseases, Dr. Springer arrives at the following conclusions:

In lues cerebri, the cerebro-spinal fluid reaction is nearly always negative; on the other hand the serum reaction is nearly always positive (in over 90 per cent.)

In tabes, the fluid showed positive reaction in 80 per cent., and the serum in 66.6 per cent.

In 106 cases of syphilis, without nervous disorder, the blood-serum showed, in the first stage, 72.7 per cent. positive results, in the second stage 92.2 per cent. (in latent condition of the same stage 60 per cent.), and in the third stage 93.7 per cent. (40 per cent. in the latent condition).

In three cases of syphilis, without disease of the nervous system, the reaction was negative. In five out of six cases of hereditary lues the serum test was positive. In non-syphilitic cases it was always negative.

Dr. Springer also emphasised the value of the Wassermann test in organic nervous diseases of children. HAMILTON C. MARR.

*Chemical, Cytological, Haematological, and Histological Studies of the Cerebro-spinal Fluid in Mental Diseases* [*Chemische, zytologische, haematologische und histologische Studien ueber den Liquor cerebro-spinalis bei Geisteskrankheiten*]. (*Jahrb. für Psychiat.*, vol. xxx, Nos. 2 and 3.) Wada and Matsumoto.

The results of these studies are summed up thus:

(1) Paralysis (certain), nine cases. In thirteen out of fourteen punctures "phase 1" reaction of Nonne was distinctly positive, and the whole albumen mass and cell-count much increased. In one case the albumen and cell reactions were at first negative, but on further examination gave positive results.

(2) In remission of paralysis the result was also positive.

(3) Fifteen cases of other mental diseases were examined. Out of sixteen punctures only one (a case of epilepsy) showed a slight positive albumen and cell reaction. On further examination of this case, "phase 1" reaction and the cell reaction were negative, while the total albumen mass was slightly increased. It is thus obvious that in some cases repeated puncture is necessary in order to finally decide the diagnosis.

(4) In the above quoted sixteen punctures "phase 1" reaction was fifteen times negative, the total albumen mass nine times, and the cell test thirteen times normal. "Phase 1" reaction has, therefore, the greatest differential diagnostic value for distinguishing paralysis from other psychoses. If the reaction is negative paralysis can be denied, even if the total albumen mass or cell-count is increased.

(5) In paralysis the relationship between the cell-count and albumen mass was not proportional.

(6) Among the cells of the cerebro-spinal fluid of paralysis there was 87 per cent. of small lymphocytes and also a very small number of large lymphocytes, polynuclear leucocytes, transitional forms, fewer epithelioid cells, and ependymal cells.

(7) In one case and in an acute exacerbation of paralysis there was polynuclear leucocytosis of the blood and relative increase of the same leucocytes in the fluid. This may be a sign that the paralytic poison is suddenly richly produced and develops its general working.

(8) Dementia præcox, six cases. In four cases the albumen and cell reactions were negative. A case which had had an apoplectic attack showed only a slight increase of cells, and in a case of chronic alcoholism the total albumen mass was somewhat increased.

(9) In the case of apoplexy in dementia præcox there was a slight increase of cells, no lymphocytes, and a remarkable increase of the polynuclear leucocytes of the cerebro-spinal fluid. At the same time there was no lymphocytosis and no change in the percentage of the single leucocyte varieties of the blood.

(10) Chronic alcoholism, two cases (one dementia præcox and one manic-depressive insanity). Both showed a slight increase of albumen, normal cell-count, and negative "phase 1" reaction.

(11) Post-apoplectic dementia, one case. Albumen and cell reaction negative.

(12) Epilepsy, five cases, six punctures. In one case, there were slightly positive results on the first testing of albumen and cells, as in paralysis, but on testing again "phase 1" reaction and cell-counts were negative, while the albumen was slightly increased. Further, there was a slight increase in the total albumen mass in two cases, a slight increase of cell-count in one case, and quite negative albumen and cell reactions in another. "Phase 1" reaction was in five punctures negative.

(13) Idiocy, two cases. Negative albumen and cell reactions.

(14) If there was a leucocytosis of the blood the cell-count of the fluid did not increase, excepting in the cases of paralysis.

(15) A proportional weakening of the percentage of similar kinds of leucocytes in the blood and in the fluid did not take place, except in one case and in an acute exacerbation of paralysis.

(16) The cell contents of the spinal fluid and of the meninges of the lowest sections of the spinal cord were not proportional.

(17) In the histologically examined cases it could not be testified that there were cases in which (as found by Merzbacher), without irritation of the meninges, there was an increase in the cell-count of the fluid.

(18) In three out of four cases in which there was a certain or probable history of lues the albumen and cell reactions were quite negative, so that it was quite easy to tell the difference between this and paralysis. Only in one case was the cell-count alone somewhat abnormal. The patient sometimes suffered from an apoplectic attack, and on histological examination there was found a cell infiltration into the pia mater.

HAMILTON C. MARR.

### 5. Treatment of Insanity.

*The Treatment of Hysteria by Psycho-analysis.* (New York Med. Rec., Aug. 6th, 1910.) Parker, G. M.

The author seeks to co-ordinate Janet's method with Freud's, believing that each supplements the other. He associates himself more

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especially with Freud's earlier work, and appears to be less acquainted with the late developments of the Freudian method. He adopts light hypnosis at the outset in many cases (though not regarding this as the ideal method) on account of the great saving of time, and states that without its aid 60 *per cent.* of the hysteric cases in his clinic at the Roosevelt Hospital could not be analysed.

Four cases of hysteria are here recorded and the author considers that they belong to three different groups : (1) Shock neurosis, or psychoneurosis, distinguished by the predominance of shock and resultant clear-cut dissociation, the dissociated psychic contents becoming organised, and producing a double process of absorption and intrusion. There is no necessary sexual causation. These cases fit in with the mechanism described by Janet. (2) This group has a wider territory and is marked by the sexual nature of its psychogenic factors, by volitional exclusion and gradual dislodgment rather than cleavage dissociation, by the direction given to these dislodged associations issuing from unfulfilled desires, and by the effect upon consciousness produced by conversion of these elements into intruding somatic systems. Hypnosis is not used as the treatment takes much time, but Freud's method alone produces any results in these cases. (3) This is the largest group, and is marked by the presence of both mechanisms in an incomplete form, Freud's being usually fundamental and the other superimposed. Janet's method must here be followed by Freud's and by light hypnosis.

Parker is a convinced though temperate advocate of the psycho-analytic method.

HAVELOCK ELLIS.

## 6. Pathology of Insanity.

*The Rôle of Bacteria in the Pathology of the Central Nervous System*  
[*Le rôle des bactéries dans la pathologie du système nerveux central*].  
(*Arbeit. aus d. Pathol. Inst. der Univers. Helsingfors, Bd. iii, H. 4, 1910.*) Homen, E. A.

The author's views are based mainly on observations in the domains of human pathology and experimental research carried out in the pathological institute of the University of Helsingfors. The following are some of the chief conclusions. Amongst other paths of entrance of virus (formed elements and toxins) the intestinal tract ranks important. Transportation of virus from intestine to central nervous system may take place not only through the blood-stream, but also by the lymphatics, especially those contained in the branches of the sympathetic nerve, and thence by the communicating branches into the spinal cord (Wickman). Experimental pathology has shown the possibility of the passage of the virus to the nerve-centres along the peripheral nerves through their lymphatics, and especially the spaces occupying the internal aspect of the perineurons. The spinal ganglia and roots act to some extent as filters or stations. Their resistance once overcome, the virus extends to the cord and its membranes, and this more readily by the posterior than by the anterior roots. Within the nervous system

extension takes place, not only along the meningeal spaces (in infants, perhaps, also the central canal) and the blood-vessels, but also the lymphatics, particularly the lymphatic spaces in the tunica adventitia and the perivascular spaces of His.

Whilst the causes that predispose to the localisation of micro-organisms in the tissues generally apply also to the nervous tissue, the latter reacts in a particular manner. It is unusual to find organisms in the nerve-elements themselves or in immediate contact with them. If placed there experimentally they disappear rapidly, owing possibly to the soil being unfavourable or to the changes produced in the nerve-elements exerting a deleterious action on them. In the mesodermal tissues, on the contrary, they localise themselves and develop fairly readily. Although the organisms may have disappeared, the pathological process may be continued by toxic bacterial products remaining in the tissues in association with degenerated elements, and circulatory disturbances resulting therefrom. If extensive tissue alteration happen to follow bacterial invasion, then the organisms may develop, or at least live, for a long time in that situation (*e.g.*, cerebral abscess).

The action of bacteria and their toxins on the central nervous system may be local or remote, or both combined. In local actions, the tissue changes are produced by the bacterial proteins, and in part by their specific toxins. There is then superadded the irritating influence of products of decomposition of tissue elements, and local circulatory disturbance. The mode of reaction of the tissue (degenerations, necroses, exudations, infiltrations, proliferations, and combinations of these) depends on the kind of organism, the number, degree of virulence, and the general and local resistive capacity of the individual. Proliferations, when present, occur at the periphery or in the neighbourhood of the primary foci. The mesodermal elements especially react by proliferation, and the adventitial to a greater extent than the endothelial cells. Proliferation of neuroglia, on the other hand, occurs, as a rule, later, and progresses more slowly. It is of comparatively slight importance, and rather secondary to the degeneration of the nerve-elements.

Mixed bacillary infection is generally more severe than single infection.

In acute infective diseases, local foci may be found in the nervous system, where no bacteria can be detected and there is no reason to suppose their prior localisation there, or even the existence of a mechanical cause, such as embolus. These seem to be toxæmic in origin. The tissue-modifications are generally slight. Sometimes they are severe and of a degenerative or destructive character. In the latter case they can hardly be due to toxæmia alone, for it is difficult to explain why the circulating toxins by themselves should produce a severe lesion, sharply limited, yet without elective characters.

A certain importance must here be attributed to the thrombi and other vascular alterations leading to narrowed lumen of the vessels that are often present in these cases. Such vascular conditions may sometimes act as initial causes inasmuch as they render possible or accentuate a toxic action which is concentrated precisely on these particular areas.

Cases where an infective or toxic agent is combined with a mechanical



agent, *e.g.*, infective embolus of a terminal artery of the cerebrum, are not uncommon. Sometimes it is difficult to decide whether an inflammatory process is primary and due to an infective-toxic agent or secondary and developed, *e.g.*, in connection with an ischæmic softening. Much discussion has taken place in connection with the thrombosis of the sinuses and veins of the pia-mater and the associated encephalites and softenings. The researches of the author's colleague, Therman, go to prove that in the majority of cases the thrombi are secondary, and caused by the same toxic process which has determined the meningo-encephalitis. The author expresses his belief that the interpretation of many lesions is aided by an exact differentiation of the various cells found in the focus under the microscope. He is convinced that the majority of the large cells, especially the so-called epithelioid cells of Friedmann, and the granular bodies, are not, as many think, derived from the neuroglia, nor from fixed mesodermal cells (adventitial and endothelial), nor from typical plasmatic cells, but are polyblasts in the sense of Maximow, or derived from these, that is to say, derived from lymphocytes. We would not be justified in speaking of primary inflammation in the case of processes, where at the initiation, and as an essential factor, we find only degenerations, thromboses, or embolisms and hæmorrhages. The presence, however, of a certain number of polyblasts in a primary focus would prove its inflammatory character.

J. H. MACDONALD.

## 7. Sociology.

*Automatism in crime* [*L'automatisme dans la criminalité*]. (Rev. *Philosoph.*, Feb., 1910.) Marro.

In the cerebral processes involved in the commission of a homicidal crime Marro proposes to distinguish two main factors, *viz.*, on the one hand, the exaltation of irritability in the affective centres expressed in the condition which he terms "psychic hyperæsthesia," and on the other hand, the presence of the pre-formed excito-motor mechanisms requisite for executing the homicidal act. It is the second of these factors that is mainly considered in the present paper. These special mechanisms have been organised in the evolution of the race in connection with the primary functions of self-preservation and reproduction, and though civilised man normally restrains them by the influence of the later developed moral and social feelings, they are readily brought into action under appropriate emotional conditions. In relation to the sexual function these mechanisms have been developed predominantly in the male in the struggle with other males for the possession of the female, and this, in Marro's view, is the reason of the greater prevalence of homicidal crime among men. The motor images which constitute this combative mechanism are most readily excited to activity when the integration of the personality is imperfect, and when, to adopt Janet's conception, there is a loss or restriction of the power to form new and complete syntheses adequate to the particular occasion, so that a condition of automatism ensues in which acts of a criminal character may be committed. Marro refers to recorded instances of such acts in the

state intermediate between sleep and waking, in somnambulism and in the epileptic dream phase, and then discusses at greater length the automatism of alcoholic intoxication. In this connection he emphasises the importance of emotional stimuli in initiating the activity of the aggressive mechanism, which, when started in these conditions, often works with an explosive violence ending in exhaustion. Military training, designed as it is to cultivate the aptitude for attacking a hypothetical enemy, renders this atavistic mechanism of aggression particularly prone to activity, and for this reason homicidal crimes in alcoholic automatism are specially frequent amongst soldiers. A number of interesting observations are briefly cited to illustrate this point. The tendency to automatism is more pronounced in individuals of defective brain and also in the uneducated. Marro has found, for instance, that the proportion of illiterates is nearly twice as large amongst homicidal criminals as compared with other classes of offenders. In general, the influences which place the mental organism in a state of inferiority, the influences which produce what Janet terms "*la misère psychologique*," favour the development of criminal automatism.

W. C. SULLIVAN.

## 8. Asylum Reports, 1909.

### *Some English County and Borough Asylums.*

*Buckinghamshire.*—Comparisons of asylum population at various times in the last forty years show some curious results. During that period the numbers in workhouses and with friends has increased by 193, and those in asylum by 253, the chief increase in both cases being between 1895 and 1905. The population of the county between 1870 and 1880 increased by 1,000 and the increase in the insane was 37. But in the next decade the population went up by 9,000 while the insane only increased by 11. Such vagaries must increase the difficulty of estimating requirements when new buildings are called for.

*Cumberland and Westmoreland.*—We note that *post-mortem* examinations were made in every one of the seventy-three deaths. The Commissioners, in noting an excellent dinner, make the suggestion that the patients' dietary should be shifted every month, so that patients should not always know what they are going to have for dinner from day to day. Among the financial tables we find one that is interesting and probably instructive to those who can follow the various factors which temporarily influence maintenance expenditure. The average cost for each of the items in the statutory expenditure returns is given for each year from the commencement of the Asylum's life in 1862. The prominent factor is that the cost of provisions has progressively decreased until now it stands at 2s. 10d. per week as against 5s. 1d. in the first complete year. Salaries and wages cost about threepence, or 10 *per cent.* more than they did. Necessaries rule a shade higher, while the dispensary charge is half what it was, and wine, etc., which stood at over a penny and three-quarters, and sometimes over two-, and even threepence, is

now represented by one-sixteenth of a penny. On the other hand, the charge for farm and gardens is a shilling or more than in the earlier days, and this must be, we suppose, satisfactory evidence of greater utilisation of the staple labour of a rural district. The net expenditure, which, of course, is liable to disturbance by calls for extra furniture and repairs and clothing, etc., works out now at 8s. 9d., which is threepence below the average of the forty-nine years under consideration.

*Derby County.*—Dr. Legge points out the divergence which exists in the practice of those who have the disposition of the pauper insane in contributing areas.

It has been suggested that less favourable cases come from industrial than from agricultural districts. This is probably true, but it does not explain all the differences that are met with. I would hazard the suggestion that an important factor may be found in the persons who send patients to the asylums; that in different districts there exist among relieving officers, workhouse officials, guardians of the poor, and others concerned, different customs or views (which may become traditional) as to the cases in which certification is necessary; that some are more disposed to send the milder cases to the asylum; that others let the patients remain at home, or in the workhouse for a longer period, so that the chances of recovery are lessened; that in various ways the patients selected for treatment in the asylum are not selected on a uniform system. That differences of procedure should exist between similar authorities is not surprising; they are very common. In some counties it seems to be the rule that an adjudication should precede an order of transfer; in others the adjudication is almost unknown. In two unions in this country attempts have been made to admit all pauper patients under two certificates as "not under proper care and control"; in the remainder of the county pauper patients are almost invariably admitted in the ordinary way with one certificate. Instances could be multiplied indefinitely.

One patient was discharged on account of one of the medical certificates not showing any facts justifying certification—a rare occurrence in these enlightened days one would think.

*Derby Borough.*—Dr. Macphail reports yet another relation of that dreadful scourge, influenza.

In the months of January and February we had a severe outbreak of influenza. During the six weeks the epidemic lasted, 115 patients out of a total of 350, and 19 officials out of a total of 58, were attacked. There were also a few doubtful cases. In round numbers this corresponded to a third of our resident population. In many of the cases the disease was of a mild uncomplicated type, particularly among the men, but in about 50 *per cent.* of the female patients and staff the symptoms were of the gastro-intestinal type. A special feature of this epidemic, the most severe in the history of the asylum, was the number of cases that relapsed once or oftener. Towards the end of February, among some of these relapsed cases, well-defined symptoms of dysentery appeared, and for the first time in the history of the asylum we have to report an outbreak of colitis. The total number affected was 23—8 males and 15 females; they were fairly evenly distributed in all the wards, and did not affect any special class of patient. I was unable to trace any communication of the disease from one patient to another. The incidence was as follows: On two distinct occasions, at an interval of a month, several patients were attacked simultaneously, had well-defined symptoms, and when they recovered the disease did not spread further. The only definite fact, which could scarcely have been a coincidence, was that practically all the cases of colitis occurred in patients who had an attack of gastro-enteric influenza a few weeks previously. There has been complete freedom from this or any other epidemic disease since the month of April, and no member of the

staff suffered from dysentery. These epidemics were directly or indirectly responsible for seven deaths, three from influenza and four from colitis.

It is somewhat surprising that the admissions in the borough supplied less than 3 *per cent.* of general paralysis, while the county admitted more than 5 *per cent.* The steady increase of this disease in rural districts compared with the somewhat stationary incidence in towns is a fact that merits inquiry. Can the explanation be that the short service system now in force for the army tends to return into rural homes an increasing number of possible subjects. The percentage of former service in general paralytics as given by Dr. Morrison above would seem to justify such a suspicion.

Dr. Macphail gives his yearly average respite from second attacks in those who have been discharged recovered and have relapsed. Last year it was three years and seven months. It is much to be wished that all would give this information. Given reasonable concurrence as to what constitutes recovery, evidence of cardinal value would be obtained as to the probability of relapse, a most important item in the natural history of the disease. This value could well be increased by recording the form of insanity on the prior attack.

*Glamorgan.*—General paralysis was found in 42 of the 382 admissions. In these eleven showed positive signs of syphilis. In 34 paralytics this disease was stated to be a contributory factor in twenty cases, while in the other fourteen it was deemed to be the principle or chief factor. Alcohol was found in 65 cases, and 155 had some form of heredity. Colliers and miners formed more than one-third of the male admissions. More than half the cases came in within three months of inception.

*Hereford County and City.*—Thirty-two *per cent.* of the admissions were found to be suffering from goitre. It would be very interesting if Dr. Morrison could show what, if any, relation to the form of mental trouble, course of the case, recovery-rate, etc., this disease may have.

The careful inquiry instituted into the cause or causes which have operated to induce a mental breakdown in those admitted has elicited the fact that the neurotic and insane heredity were the most potent as a primary factor, 23 *per cent.* males and 40·8 *per cent.* females having a definite faulty heredity. Syphilis in males gave 17·1 *per cent.*; nearly all were men who had served with the colours and had seen foreign service. As a secondary cause alcohol was found to be operative in 35·3 *per cent.* of adult males, but in 22·8 *per cent.* the excess had followed a prior brain affection, and in the remainder, 11·7 *per cent.*, the habit had been acquired by persons with a direct insane or neurotic heredity. In 6·5 *per cent.* adult females the habit was also found to be associated with an insane or neurotic heredity.

Dr. Morrison, in adopting for the first time the new tables, adverts to the extra work involved in keeping full and accurate registers. It is one advantage of the new system that it does involve accuracy in registering facts when found, as also industry in seeking for them. It is to be hoped that in time all asylums will insure this accuracy by adopting the tables, for though the precise value of the tables themselves may not be evident, yet in time to come the enormous collection of accurate



facts must, in the hands of experts, yield results of the highest importance. Anyhow, the thanks of the Association are due to all those who undertake for the general good the undoubted increase in labour involved.

*Hertfordshire.*—The tendency to increase in the number of patients for whose care authorities are liable is illustrated by the fact that this asylum, opened but a few years ago, has need to build for 234 additional patients. At the same time the new wards, when opened, were called upon to receive forty Middlesex patients from Napsbury, an asylum opened still more recently. It must be consoling to the ratepayers to find that the new accommodation has been provided for less than £100 per bed.

Dr. Boycott, though he has not gone the full length of adopting the tables of the Association *en bloc*, gives a large amount of valuable information on the principal lines laid down by the Statistical Committee. In one respect we think that he has made an improvement. He gives the form of insanity on direct admission, dividing it into two columns, one dealing with first attack cases, the other with not first attack. Such information in large bulk would be very useful. We note, too, that he gives a column or two to the relapses admitted each year. We would suggest an improvement by showing, not the relapses only, but the year from the recoveries of which relapses have been admitted during the year under report. This would be analogous to the information of each year's working given in the old Table 4. The results would tend to show the period of respite to which we have alluded under Derby Borough. We note that in the table of religions no less than twenty-two are detailed, while a considerable margin is left for cases in which no form of religion is stated, this affording possibilities of yet further forms of belief.

*Lancashire, Prestwich.*—On one point all who have to do with the care of the insane must be agreed—the importance of freshly discharged recoveries being afforded the best opportunity for maintaining regained health in the early days of freedom. Various expedients are adopted, but we think that that which is suggested by Dr. Perceval is wholly commendable. A large area like Lancashire could well afford to try the benefits of such a home as he suggests.

I have, on a previous occasion, called attention to the need, in my opinion, of a convalescent home. I venture to do so again. As pointed out then, there are a number of cases that reach a certain point in an asylum, and there they stop. There is something wanted that we cannot give them. To these cases the value of such a home can hardly be over-estimated. The sickly man who must immediately seek work, the delicate young mother who has to take up at once the full household cares and duties of the hardworking poor, the anæmic domestic servant compelled to get a place as quickly as possible, these, and many others, are constantly coming under my notice. A suitable convalescent home on the coast might convert them into permanent recoveries instead of swelling our list of recurrences.

Most will agree with Dr. Perceval as to the evil influence exerted by bad environment, but many will dissent actively from his assignment of

the *causa causans*. Certainly many women of the new pugnacious type will abuse him for daring to think that the female sex was created solely for maternity and its duties. We are a little puzzled, too, in trying to fit in his opinion that poverty is the great cause of alcoholism with another very prevalent idea that alcoholism leads to poverty. Which idea is right?

There are few things that have not been named at one time or another as a cause of insanity, from changes in the moon down to perverted ideas of religion. The actual conditions, at present existing, conducive to the production of weaklings subject to insanity are not far to seek. This country, and others, have become dominated by a system of commercialism by which wealth and power are so unevenly distributed that for thousands of persons permission to live, even on the borders of starvation, is only granted on conditions of labour, compared to which the lot of the old negro slave was princely. The greatness of a nation now is judged by the amount of its exports and imports rather than the happiness and welfare of its people. And so we have little children working in the factories, and women, to get back to work, neglecting their duties of motherhood, for which alone they were created. The inevitable result is the production of a large proportion of the candidates for the asylums. I should like to say with regard to drink, of which we hear and see so much in this specialty, that I feel convinced, and the conviction has been growing upon me for years, that poverty is the great cause of alcoholic intemperance.

*London City.*—This institution continues to cater actively for the less affluent private patients, of whom sixty-five, or nearly half of the admissions, came into the asylum. They now constitute more than a moiety of the total population, and, of course, find the greater proportion of the available income. We note that out of the total admissions seven male and three female cases were of general paralysis. It would be highly interesting to know, especially as to the female cases, whether they were among the rate-paid or private cases. In fact we think, as we have said before, that with all the material at his hand Dr. Steen could give some comparative information of value. His population is drawn from eleven countries other than England.

Dr. Steen has adopted the outdoor treatment for many cases, but could not take the risk of letting them sleep out of doors after the commencement of November.

As recorded above, twenty-six patients were sent out on leave of absence on trial. In many cases this was done as a probationary measure to test the fitness of the patient for complete discharge; in a fair number of instances, however, this procedure was made use of to give the patient a holiday away from the institution. It is hoped that in the coming year the experiment thus commenced will be continued to an even greater extent.

*Salop and Montgomery.*—The two counties have at last taken the right step, by agreeing to dissolve union, to remedy the constant overcrowding and its attendant evils which have beset the management for years past. Montgomery is to go out, and provide for its own lunacy, claiming only that its contributions should be paid back to it. The four boroughs still in the county are to pay, under a revised agreement, about £9 per annum per bed for accommodation—a very reasonable charge of 3s. 6d. per week.

The Visiting Committee appear to have been very early in the field

in attacking the pension classification, as they published a **very fair** scheme on or before January 19th, 1910.

We note in this, as in other purely rural counties, that **admissions** are supplied by the general labourers far in excess of the farm labourers. The latter are probably in considerably greater numbers **than the** former.

*Staffordshire.*—The Superannuation Act forms the subject of some comments. As this county in quite recent years set a good example of framing a very liberal pension scheme, the remarks on it shape rather differently from those in other quarters where the scheme is a novelty. Dr. Spence puts the matter very reasonably. We are glad to note that the liberality of the authority has not been exhausted by its previous work, and that it is to be exercised in bringing up as far as possible the future to the past benefits, which formed part of the contract of service.

The year 1909 may be regarded as one marking an epoch in the history of those who make the care of the insane their life occupation. The Asylum Officers' Superannuation Act received the Royal assent in December last, and the first day of April this year has been fixed as the date when the Act shall come into operation. As far as the asylum officials of Staffordshire are concerned the new Act is by no means an unmixed blessing, and it is feared that its effect will not tend to minimise the work either in the selection of the staff, especially of the subordinate members, or in the amount of clerical work, owing to the extra labour which the office staff will be called upon to perform in order to carry out its enactments. The Staffordshire officials of the first class already rejoiced in the benefits of a pension scheme which permitted them to retire after twenty-seven years' service with a full two-thirds of their salary and emoluments. Under the new Act they cannot receive such a pension until they have served thirty-four years, a very important consideration, especially for the female members, who are really not able to face the strain of so many years' trying work, and at the same time do justice to themselves and to the work entrusted to them. The Asylums' Committee of the Council have advised that, where possible, an addition of such a number of years to the length of service as would place those who are already on the staff in as good a position under the new Act as they were under the old county scheme, should be recommended, as provided for in Section 1, Sub-section 3 of the Act, but whether the Home Secretary will be equally generous in approving of this course is quite another matter. The payment of the contributions of all those who were on the staff of the three asylums at the date when the new Act commences its operations is a proof of the kind and thoughtful treatment accorded by the Council to its officials, who fully appreciate and are grateful for the consideration. Notwithstanding these concessions, the fact remains that the position of the Staffordshire Asylum employees of all grades is not improved by the new enactment, but that, on the contrary, they are placed in a less advantageous position than they were in at the time of the passing of the Act.

Dr. Christie reports that on account of the lessened pension and the longer service the great majority of the staff at Stafford have elected to contract out of the Act, believing that their rights under the former scheme are assured.

Dr. Spence presses for more cottage accommodation for attendants, showing that this is not only a morally justifiable demand, but one that has a decided influence in promoting long service. His married attendants have an average service of fifteen and a half years, while the unmarried have only two and three-quarters. Besides, as he points out, so much more room is set free for patients. Dr. Menzies adverts to the same need. Some of his attendants receive £10 lodging money, which

does not nearly meet the rates and rents of their houses. Some of them have to walk home into Leek, as there is no cottage accommodation in Cheddleton itself. Apparently plans for some have been submitted to the Local Government Board and Home Secretary, but disallowed on the score of cost.

The statistics are carried out fully on the new system in each asylum. The great differences between these in some matters, which we have pointed out, still exist, but they cannot be valued rightly unless it is certain that each asylum is fed, as far as direct admissions are concerned, by its own defined portion of the county. At Burntwood the admissions consist almost wholly of acute mania, acute melancholia, epileptic insanity (of which there appears to be an undue proportion throughout the county) and general paralysis, these accounting for about 200 out of the 280 admissions, while stupor, confusional insanity, primary dementia, the delusional, and volitional varieties are not represented. At the other asylums it is different, Cheddleton especially supplying several instances of the last-mentioned forms. Taking all asylums together the mania cases exceed notably the depressed forms, only Cheddleton showing a slight tendency the other way. A comparison of the ætiology found in the three asylums does not supply any suggestion of explanation, the usual predominant factors appearing in much the same proportions where stated as "principal." Alcohol is a shade more frequent at Burntwood, while syphilis was found more frequently at Cheddleton, and was associated with a slightly larger proportion of general paralysis. Occupation certainly shows some difference in the various areas. Ironwork and its allies are well represented at Stafford and Burntwood, while miners and pottery people appear in considerable number at Cheddleton, no less than twenty-four out of 188 admissions being from the latter calling and its many subdivisions. In all the farm hand is infrequent, and the general labourer far outnumbers him.

The recovery-rates vary, but not to any great extent, centreing at Stafford and Burntwood round 30 *per cent.* At Cheddleton the advantage of separating direct admissions from others is well shown. The rate on all admissions is 23 *per cent.*, being undoubtedly degraded by the fact that more than one-third of the admissions were dumped from the other asylums. If these are taken away the rate rises to 36 *per cent.* The death-rates in all are heavy, being considerably higher than the average of the counties generally.

One feels, after an inspection of the great mass of carefully recorded figures, that a skilled collation and analysis of the more interesting and important points would well repay itself. The strenuous occupations, more than one of which has its own trade health-risks, could well bear working out. In this regard perhaps more interesting information could be got than from an area like London, where the complexities of life are so great, and where the varieties of work are less sharply cut and defined.

*Suffolk.*—Dr. Whitwell makes some general remarks of value on the subject of the spread of general paralysis. He supplies two excellent maps, the first showing the distribution of reported cases of the disease over the whole kingdom, the second showing its distribution over his



own area. As might be expected, these centre principally round the large towns, Ipswich and Lowestoft and their vicinity harbouring the larger proportions. Bury is not so productive. The map rather bears out notes made in these columns for years past—that the greatest breeding grounds are large cities certainly, but large cities where shipping is a principal industry. The exposure of ship men by their reckless conduct to the incidence of syphilis no doubt has much to do with this point. He was able to attribute two cases occurring in an out-of-the-way rural parish to the accidental arrival of strangers.

He devotes some of his space to flouting the lethal chamber and those who hanker after it. There is a theoretical or philosophic method of meeting this very silly idea; there is also the practical one, adopted with success by the writer. The proposer may be asked if he would be prepared, supposing that the idea had been adopted, to consent to a beginning being made with his own wife or daughter should the affliction overtake them. The personal application of a principle begets sober reflection, and there is no more chance of the insane or the undesirable being put to death in this country than there was of Mr. Lowe's proposal to tax matches being adopted.

*Sussex, East.*—We adverted last year to the new form of farm account adopted by the Committee. This year the report contains both the old form in general use and the new form. It is interesting to find that under the old form a credit balance of £781 is proved, while in the new there is a loss of £60. Both are true in a sense, the chief criterion being whether any value is to be assigned to the labour of patients. We note that one general paralytic was discharged as recovered, while one systematised and eight non-systematised delusional cases had the same good fortune.

*West Ham Borough.*—Dr. Hunter is able to re-assure his committee that there is a steady decrease in the occurring insanity of the area. This fact he deduces from the declining proportion that first admissions display to the population of the area. These numbered 11.76 per 10,000 in 1902, but have progressively decreased to 4.54 per 10,000. We note that 18.4 *per cent.* of the asylum population on December 31st were epileptics.

Dr. Hunter gives a table showing the increase or decrease in weight during the residence of each individual who recovered. Two females appear to have lost 6 and 8 lb. respectively, but in all the other 74 males and females there was a gain ranging from 21 lb. to 2 st. 6. lb. This speaks volumes for the general suitability of the diet chosen.

*West Riding, Wakefield.*—The result of Dr. Bevan-Lewis's purgative treatment of colitis is that in 1908 there was no case on record. In 1903 the first six months yielded forty-six cases with sixteen deaths. The special treatment then commenced. The last six months of that year yielded eleven cases and two deaths. Since then the disease has waned and departed now entirely. The very simplicity and success of this treatment leads to the hope that similar well-conceived plans may yet help in the solution of problems, not more complex, which at present defy treatment.

The electro-therapeutic department continues to show encouraging results. Of course the recoveries are chiefly derived from those forms of insanity which tend to get well under ordinary treatment, and they seem mostly to be of the confused, stuporose type. But two cases of acute delirium appear among the cures, accompanying the use of the sinusoidal bath. As we know, no form of illness, physical or mental, demands the quicker application of treatment of the right kind; and it must be of the right kind, since there is little room for mistake in the rapid downward progress. The idea is suggested that there must be something directly active and specific in this form of electricity, beyond the general idea of indirect benefit from alterative or tonic action. We note that in the course of the year no less than six cases of this terrible form were admitted. Turning to the death and recovery tables we can trace the touch-and-go character of the attacks. We find five recoveries and two deaths. In a report coming from such a strong observer as Dr. Lewis one reads with much interest his classification of the admissions. We observe that in the year under report he has had to use all the forms given, with the exception of moral imbecility impulse, and obsession (volitional). Moral insanity, which is so much neglected by most, provides one male and five females, the insanity of doubt one female, and alternating insanity one female. Confusional insanity, stupor, and primary dementia show eight, eight, and twenty-seven cases respectively, the female sex providing a disproportionate share of each variety.

Turning to C. 3, showing the forms of insanity on admission of the recoveries, we find that one female epileptic recovered; two had the same good fortune with alternating insanity, while three males and ten females recovered from systematised delusion, and three males and one female ceased to be morally insane. These facts are worth remembering by those who are apt to make a prognosis from the name of the particular disease.

*Wiltshire.*—The adoption of an economiser for the boiler feed has led to a saving of over £60, or more than 16 *per cent.*, in the cost of coal used. As the capital expenditure involved amounted to £650 the investment appears to be lucrative.

There is something to be said on each side of the question raised in the following paragraph :

(13) There have been at one time or another during the year thirty-seven paying patients in residence, the charge made varying from 15s. to 20s. per week. All these patients are persons who, it is understood, if the Committee declined to receive them as paying patients, would be sent to the asylum as paupers through the guardians in the ordinary way, and the Committee have continued to adhere rigorously to the regulation which they some time since laid down in this connection not to admit as private patients any who have means sufficient to enable them to be treated in a private asylum, every application of this kind being subjected to careful investigation.

A visiting board of guardians left behind them a note :

We agree with a suggestion made by Dr. Bowes that it would be beneficial to the institution if a separate building could be provided where the most hopeful cases sent might be treated and kept apart from the worst patients.

This should strengthen his hands in asking his committee to provide that which would undoubtedly increase the curative functions of a good asylum such as his.

We entirely endorse Dr. Bowes' opinion about the treatment of persons charged with attempted suicide.

As many as eighty-five had a tendency to suicide, the latter being a high proportion. In this connection it may be remarked that the administration of the law in dealing with cases of attempted suicide appears unsatisfactory and to vary in different districts. In some instances the attempt at self-destruction is undoubtedly deliberately made with full knowledge of the nature of the act, but it does not appear sufficiently recognised that in the majority of cases those who make the attempt are irresponsible by reason of their state of mind. In the absence of expert advice great injustice may, and probably is, inadvertently done in committing such persons to prison instead of to an asylum where they might receive the treatment they require.

#### *Some English Registered Hospitals.*

*Barnwood.*—The hospital has had a very successful year both in its duty to its patients and in finance. The recovery-rate was 50 *per cent.*, both sexes having the same rate. : 30 *per cent.* of its patients were entertained and cared for at considerably less than the average cost. The staff likewise benefit from the application of excess of income, for the scale of remuneration has been increased, and no less a sum than £5,000 has been added to the Pension Fund, which now amounts to £67,000.

We think that Dr. Soutar takes a very correct position towards the statistical tables, which are furnished in full. He deprecates their being read as purporting to give accurate informing about particular cases ; rather he looks forward to the proper study hereafter by experts of a large bulk of records.

The study which the compilation of the tables necessitates has, however, its immediate practical good in that it furnishes the physician, more or less fully, with a knowledge which enables him to prescribe for the patient who has recovered, the conditions upon which and the limitations within which he must live if he would best avoid the risk of another collapse. This education of patients, during convalescence and afterwards, in the mode of life which offers greatest promise of security from another attack, is based on an intimate study of the individual and his environment. But of even the imperfect knowledge thus acquired only fragments can be presented in our annual statistics, and these, without caution, may lead to false deductions. Thus, year by year, we record that an inherited neurotic taint was ascertained in a large proportion of our cases—in 1909, in 45·7 *per cent.* of the total admissions. When stated in this way, it would seem that heredity is far and away the most potent factor in the causation of insanity, but on that conclusion doubt is cast by the reflection that insanity occurs in but a trifling proportion of those who come from the same so-called "neurotic" stock. Gross instances there are in some families of wholesale mental failure, which tells of the potency of the taint transmitted by physiologically faulty ancestors. But such instances are relatively rare. Much more common is it to find in succeeding generations only isolated cases of mental defectives amongst a host of healthy and vigorous persons. It is clear that in these two classes very different values appertain to the influence of heredity as a causal factor, and figures which show the percentage of ascertained insane and neurotic heredity in the total admissions should be accepted with the reservation which this consideration requires.

*Bethlem.*—The task of converting the old iron window-sashes into wooden, with an increase of light and cheerfulness, is progressing fast. It strikes one when going round old asylums that the pioneers of more enlightened treatment missed one great opportunity of differentiating between asylum and prison. Economy could hardly have determined the retention of such depressing fittings.

The need to vacate wards for the alteration has somewhat restricted the volume of insanity treated. The recovery-rate has been high, as it was 47·16 for the certified patients, the females having a shade the best return. It is somewhat striking that the same rate for the voluntary patients was ten points lower, the females among them having a considerably lower rate than the males. It appears from these figures that early treatment does not always lead to the best results, though probably a better return would be shown if all the voluntary cases had stopped for the time required to make a good recovery. The death-rate among the latter class of patient happens to be slightly higher than that of the certified, but this might be a mere accident independent of the mental disease. Nine general paralytics were admitted, on seven of whom definite syphilitic evidence was found. They were all males. We note that no stupor cases came in, while confusion and primary dementia were well represented, especially the first named. Hereditary influence was found in a little over one-third of the entries. This proportion was slightly exceeded by prolonged mental stress. Alcohol appeared in only six of 164 admissions, while syphilis accounted for seven and influenza for eight cases. We note a recovery from moral imbecility and also one from general paralysis.

*The Coppice, Nottingham.*—The paucity of male patients is noted here, as in many institutions admitting private patients only. For some years past the Commissioners' Report has shown over all England a lessening admission-rate of males in relation to that of females of the private class, while in respect of pauper admissions there is but little variation. As the Commissioners say in their entry, it is a cause for wonder that there should be any vacant accommodation, seeing the substantial comforts given for so low a rate as an average of £2 2s. 6d. per week. Low as it is, not more than 10 *per cent.* of the patients can meet the average cost. Interest from accumulated benefactions enable this benevolence to be practised.

*The Retreat, York.*—Dr. Bedford Pierce complains, not without reason, at the long duration of disease on admission.

With reference to the duration of the mental disorder before admission, it was found that if the chronic cases be excluded, and all who had been ill more than two years, and also those who had had previous attacks, the average length of time that the patients had been ill previous to their reception was six months. It is difficult to avoid the conclusion that a great deal of this time was wasted, and that had the patients been placed under care earlier the results would have been more satisfactory.

We note that among his seventeen recoveries fourteen had been ill before admission. He was able to discharge as recovered one female who had laboured under systematised delusional insanity and one male



with obsession. Heredity, either insane or epileptic, was found in half the cases, the toxins being quite slightly represented. Recent melancholia was by far the most prevalent form of insanity admitted, primary dementia and confusion following. The more excited forms were but few. There was no death among the males, this being a record.

The Commissioners repeat their just protest against the barbarous practice of patients being taken for their interviews with the judicial authority to the police-station. We repeat, too, that those who are responsible for the practice fall away from that humanity to the insane which was a marked attribute of York of old.

*Some Scottish District Asylums.*

*Aberdeen, Kingseat.*—We note that in this asylum the Plenum system was tried and found wanting, and has been replaced by radiators and natural ventilation. It is found that the change has been attended by saving of cost as well as by sanitary improvement.

The last of the closed villas has now been opened, the change necessitating an addition of four nurses to the staff. Dr. Alexander presses for new admission blocks in order to remove the maniacal and depressed from other patients, for their treatment on hospital lines. As we have pointed out before, this is a logical and necessary element in perfected segregation, but it has its dangers. The aggregation of excited cases is inconvenient and sacrifices to some extent the hospital principle, whereas abundant experience shows the benefit of *all* curable cases being taken into one building and treated on hospital lines. The dilution of the excited cases tends to reduce excitement, while simple arrangements can be made for any cases of inordinate or irreducible excitement being dealt with where they can do little harm to others.

*Ayr.*—This, the first report issued by Dr. M'Crae, is a readable and instructive document. Without going so far as he does in deprecating the importance of ferreting out heredity, we must say that there is much sense in what he writes about the factor.

As the result of inquiry into the previous history of each case, a hereditary predisposition to insanity and nervous diseases could be traced in sixty-four cases, or 41 *per cent.*, which closely corresponds with last year's statement. It is commonly held that, given adequate means for inquiry, all cases could be shown to have an insane ancestry. But what individual among the general population would not only too readily detect a peculiarity in some reputable forbear, if he believed it to be to his advantage to do so? It is to be feared that the popular awe and dread of this as yet mysterious influence goes a long way to breed despondency and alarm, and even despair, in the minds of many earnest and worthy persons, who may lose heart in the battle of life. I desire to emphasise this point because it is to heredity that the origin of disease is too apt solely to be ascribed, and too little attention is paid to environment, which after all is an ever-increasing grand total of accidents, to which all of us are continuously subjected. A fuller study of our surroundings, which are tangible, is more likely to help us towards an elucidation of the causation of mental diseases than a fatalistic belief in the mysteries of heredity. Questions of heredity require so many generations to produce material sufficient to establish *evidence*, that can only be profitably studied by special investigators in lower forms of life, and applied by analogy to the case of man. The asylum physician is better employed in using the material he has to hand in methods of clinical research (which is essentially approaching the subject from the environmental aspect), than

by attempting to unravel questions of heredity as concealed in the very unreliable data mostly furnished by the relatives of insane patients.

*Gartloch.*—Dr. Parker gives, as usual, some interesting tabular information bearing on his population. This must be, unfortunately, somewhat discounted by the fact that many cases are treated at Duke Street, and thus do not reach him. But, of those admitted by him, he finds that the period of life from thirty to fifty supplies a greater proportion than the antecedent or subsequent groups of ages. He also continues to find increasing support of former experience that heredity of alcohol tends to early breakdown. Of the 112 cases in which he found a complete history, 78 *per cent.* of those who became insane before and at the time of adolescence (fixed at twenty-six years of age) had alcoholic heredity, while this was associated with only 40 *per cent.* of those of a greater age. Dr. Robert Jones found exactly the same facts. Of course these figures, which have become reliable by their long accumulation, cannot be taken to controvert Dr. Karl Pearson's findings as to the heredity of alcohol. They only go as far as establishing that among those who have an alcoholic heredity the predisposition is to break down early. It would seem, at least, that if alcohol has no direct deleterious effect on offspring, it must have some share in producing an inborn condition of non-resistance to other ætiological factors.

Dr. Parker points out, again, the bad effects of boarding out on the residue of asylum population, and suggests that these might be met by boarding out some of the troublesome but not dangerous cases, under a carefully prepared system of grouping, with medical supervision. He thinks that the freer life under these conditions would tend to reduce troublesomeness, and seeing that experience goes to show that lunacy tends to adapt itself to environment, we should think that such an idea is worth trying if a suitable locality can be found.

#### *A Scottish Chartered Asylum.*

*Royal Edinburgh Asylum.*—We turn with much interest to this report, as no doubt will be the case with many others, lay and medical, who have been accustomed to study it in a long series of years as the exposition by skilled observers of interesting and important points occurring in the practice of the year. We are glad to see that the managers are able to report a continuance of the good and successful fight against the common enemy. Dr. Robertson's own report breathes progress in every part; it is quite certain that he will take every advantage of his present great opportunities to give full scope to those original ideas which mark his attitude to the insane. One would have wished to be able to lay down his report without any feeling but that of complete satisfaction. This, however, cannot be the case, for in pointing out aims which are undoubtedly right, and have been endorsed by the practice of all his compeers, he has been indiscreet in classing as undesirable some practices which have been shown to be incontrovertibly sound, on grounds of reason as well as of emotion, and only to be inapplicable when wrongly applied. It is in no carping spirit that we make this criticism; we desire only to speak in the interests of

all those who have, like himself, to face most anxious responsibility, those who may well to some extent feel themselves condemned in the sight of the public.

*Asylum being hospitalised.*—Under the supervision and direction of these new officials, trained, as almost all of them have been, in hospitals, the work done by the staff has naturally assumed features of a more hospital character. This is our aim nowadays, and nothing has aided us more in attaining this object than the introduction into asylums of hospital-trained nurses. My own policy for many years has been openly to put under suspicion every practice that is in operation which is peculiar to asylums. If I find I can do without it I abolish it, and if I find it cannot be done without, but that it can be replaced by another method of a hospital character, then I introduce that. Subjected to this stern criticism it is surprising how many anachronisms and unmedical traditions have been exposed, and with a policy of hospitalisation so definite and active, progress towards the goal we strive for is a comparatively simple matter.

*The disuse of padded rooms.*—As an instance of characteristic asylum practices which have been discarded, the disuse of padded rooms and of the practice of locking up patients in single rooms by day may be mentioned. Strange as it may seem, the padded room, of which we are now beginning to feel ashamed, was apparently invented about sixty-six years ago by Conolly, the great apostle of the non-restraint and the humane systems of treatment for the insane. It is quaintly described by him in his sixth report as "a room of which the floor is a bed and the four walls are padded." In his day its employment was without doubt a step in advance, as it was a substitute for the less humane methods of mechanical restraint by strait jackets and straps which he had discarded, and was a sheer necessity. Owing to the ill-treatment which his patients had previously received at the hands of their attendants, many were revengeful and aggressive, and considerable risk was run when restraints were removed for the first time. For ten years the system of non-restraint was not officially recommended by the authorities because of this danger. At that time the padded room was no doubt needed, and its use was to be commended, but now that the art of tactful management is practised, and patients from the first moment they enter the wards are treated with consideration and kindness, it has become practically unnecessary. Cases of furious or raging mania, such as were described in those days, are never seen now, because they were goaded into being by the vile treatment they received, whereas skilful treatment has a tranquillising effect. We now employ a very much larger staff than was done in those days—probably two or three times as great—and we have a large night staff, while they had none. Our attendants and nurses are not only more numerous, but they are carefully trained and highly skilled, and they are of a more intelligent and respectable class. Conolly writes of the nursing staff of that day that they "were worse dressed and wilder looking than the generality of the patients." With a staff such as we now have and good supervision, we rely on constant personal care and attention by night and day to tranquillise the excited. We are glad to see these symbols of the past disappear, not so much on account of any direct harm they actually did to the patients when not abused, but because their influence on the *morale* of the nursing staff was not elevating.

Is it in accordance with medical science to say that cases of furious or raging mania are never seen now? Let us take the admissions into Morningside itself during the year (Table XI): three cases of acute delirious insanity in each sex are shown, and among the recoveries one male, and among the deaths one female—the latter should read as two females if "exhaustion from delirious insanity," assigned in the death-table (Table V), may be taken to refer to these cases. There is an obvious inaccuracy in the figures of Table XI. It may be that these cases are to be excluded by the saving clause of "such as were described in those days." But even if this is so, can we exclude the cases of furibund epilepsy and of alcoholic illusions which are liable at any time

to come under our notice? Then what is to be gained by preaching that such cases can be manufactured by forms of treatment that are dead and gone long ago? We all know that any case may be spoilt by wrong treatment, but as such intra-asylum treatment is now impossible, is it right to suggest that failure to tranquillise by skilful treatment points this way? We entirely object to the terms in which Dr. Robertson has spoken of (*a*) the padded room and (*b*) seclusion. With regard to the former, he seems to have completely forgotten that second purpose for which the padded room is now generally used—the care of the weak and feeble, whose tendency to fall about and injure themselves has been so mercifully obviated. And as to the latter, surely the occasional use is dictated by consideration of what is proper for the patient, for the other patients, and for the staff itself. For the patient we know that continued exposure to the operation of external stimuli in a state of excitement is prejudicial, and that its bad influence can be modified and often removed by withdrawal of the patient from them, by his being placed by himself in an unlocked room, and that therefore it is called for as a medical procedure. If, as often happens, the patient cannot be got to see this for himself, and continues to expose himself, common sense demands that the treatment adopted shall be made efficient by turning the lock on him. We need say nothing about the good of the other patients; environment is too important an element nowadays to be neglected. Why should a sick patient, sent to an asylum for tranquillisation, be distracted and injured by preventable noise and alarm? As to the staff, there can be no more demoralising agent than continued hopeless waiting for better things. Nurses are but mortal, they themselves are liable to mental injury, they work in bad environment, and should be saved that continued mental stress which ranks highest among recognised ætiological factors, outside heredity and alcohol. It is not the influence of such “discarded practices” as padded room and seclusion that is bad for their *morale*; it is the wrong spirit in which they are used. It is the fatal ease of their use that engenders a wrong frame of mind. The same arguments apply precisely to the bed-treatment of acute insanity, which Dr. Robertson uses with approved effect. At one time this was decried by many, officials and others, as leading to a lazy, trouble-saving attitude, but now it is freely adopted as the best of all treatments when used remedially. So far from the *morale* of the nursing staff being injured by these practices, we should imagine that it would be fortified by their use when it is clearly seen that they are adopted by a strong man who is known to be utterly opposed to their improper use. Nothing could better demonstrate serious but determined consideration of the patient’s needs on his part. The present writer had the advantage many years ago of being told by a Commissioner, who had acquired his physicianly frame of mind in a general hospital and not in an asylum, that it is most unphysicianly to neglect the use of any form of treatment, such as restraint if it was called for, however distasteful it might be. When reading that one patient was secluded at Morningside “on account of maniacal and dangerous excitement,” we cannot help feeling that Dr. Robertson himself has recognised the justice of this view.



## Part IV.—Notes and News.

### THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE sixty-ninth annual meeting of the Association was held in Edinburgh, at the Royal College of Physicians and Morningside Asylum, on Thursday and Friday, July 21st and 22nd, 1910.

The retiring President, Professor W. Bevan Lewis, M.Sc., occupied the chair at the commencement of the proceedings.

*Present* : Drs. T. S. Adair, H. Alexander, J. Bain, L. D. H. Baugh, D. Blair, C. H. Bond, D. Bower, A. H. Boyle, J. F. Briscoe, L. C. Bruce, R. B. Campbell, J. Carswell, J. Chambers, S. Coupland, A. R. Douglas, T. Drapes, C. Easterbrook, T. A. Elkins, J. J. Fitzgerald, J. W. Geddes, W. Gilmour, C. H. G. Gostwyck, W. Graham, R. D. Hotchkis, J. C. Johnstone, Robert Jones, W. S. Kay, J. Keay, N. T. Kerr, T. W. McDowall, T. C. Mackenzie, G. J. Macphail, H. C. Marr, C. Mercier, J. Middlemass, H. M. Mills, H. Morton, G. E. Mould, W. Muirhead, Hayes Newington, L. R. Oswald, W. A. Parker, Bedford Pierce, W. Reid, G. M. Robertson, W. Ford Robertson, J. Rorie, G. H. Savage, C. J. Shaw, R. Percy Smith, R. C. Stewart, A. Stoddart, J. C. Sturrock, A. L. Taylor, D. G. Thomson, T. Seymour Tuke, A. R. Urquhart, and D. Yellowlees.

*Visitors* : Drs. Chas. Clarke and H. H. Drysdale (Cleveland, U.S.A.)

*Council attendance* : There had been present at the previous Council meeting: Drs. Adair, Bevan-Lewis, Bond, R. B. Campbell, Chambers, J. J. Fitzgerald, Graham, Hotchkis, Robert Jones, J. Macpherson, Mercier, Miller, Mills, Mould, Hayes Newington, Oswald, Percy Smith, Stoddart and Urquhart.

The following gentlemen intimated regret at their inability to be present: Drs. Benedikt, Marriott Cooke, Kraepelin, Morel, Needham, Toulouse, Turnbull and many others.

#### MINUTES.

The PRESIDENT reminded members that the minutes of the last meeting had been published, and it was usual to take them as read.

The minutes were taken as read, and were signed.

Next came the election of officers and nominated members of the Council. Voting papers for this purpose had been distributed, and some had been received by post. The latter would be added to the others. He appointed Dr. Stoddart, Dr. Thompson, and Dr. Bedford Pierce as scrutineers. After the ballot had been taken the President announced that the nominations had been accepted.

#### DR. NEEDHAM'S ILLNESS.

The PRESIDENT said he would like to refer to the serious illness of one of the Commissioners in Lunacy, Dr. Needham, who was lying at a nursing home at Leeds. He said he was sure none of those present would wish to allow the occasion to pass without voicing sympathy and condolence with him. Members knew Dr. Needham's genial personality so well, and his interest in all lunacy administration, that it would be a graceful act to express to him, through the General Secretary, a sympathetic message.

Agreed.

The PRESIDENT said the next item was the appointment of Examiners for the ensuing year. They had been already nominated by the Educational Committee and approved by the Council.

Agreed.

#### APPOINTMENT OF AUDITOR.

The PRESIDENT pointed out that this year Dr. Craig retired as auditor.

Dr. SEYMOUR TUKE proposed Dr. Robert Steen, of Stone Asylum, as second auditor.

This was seconded and agreed to.

#### PARLIAMENTARY COMMITTEE.

The PRESIDENT said the list of nominations for this Committee was already before the meeting, and it had been approved by the Council. It was in the province of members to note any absent name, or to add a name.

Dr. BOWER said he felt some diffidence in adding a name to an already large committee, but as the subject of the feeble-minded would be before the Association, he would like to add the name of Dr. R. L. Langdon Down.

Dr. SEYMOUR TUKE seconded the motion, and it was carried.

#### EDUCATIONAL COMMITTEE.

The PRESIDENT said the Educational Committee was a numerous body, but that was fully explained. All the examiners were included, and rightly so.

Dr. BOND said he had received a letter from Dr. James Rorie intimating that he would like to rejoin the Educational Committee. He (Dr. Bond) had pleasure in proposing it.

It was duly seconded, and approved.

Dr. YELLOWLEES expressed the desire to withdraw his name, as his sight would not now serve him well. He would like it withdrawn from both committees.

The PRESIDENT said he did not think that request would be at all readily acceded to. Members would like to see Dr. Yellowlees' name on the committee, even though he might not be present at its meetings.

Dr. YELLOWLEES said it was very good of the President to say that, but he did not feel he was of any use on either of the committees.

The PRESIDENT said the Association wanted Dr. Yellowlees' name on the committee, and he thought the meeting would be unanimous in leaving that name on the list.

#### LIBRARY COMMITTEE.

The PRESIDENT said the list of the Library Committee nominations was before the members, and he thought it was a highly representative committee in every way.

Agreed to.

#### REPORT OF THE COUNCIL.

The GENERAL SECRETARY read the report of the Council to the annual meeting, and moved its adoption as follows:

The number of members—ordinary, honorary, and corresponding—on December 31st, 1909, was 707, to which were added in the list printed for January 1st, 1910, the names of fifteen ordinary members elected during the year 1909, making a total membership of 722. This is an increase of twenty-six as compared with the membership of the previous year, and as contrasted with eleven, which is the average yearly increase during the last ten years.

The following table shows the membership during the past decade:

Members.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.
Ordinary . . .	568	580	586	597	620	641	638	645	652	673
Honorary . . .	38	37	37	36	35	32	32	30	29	32
Corresponding . .	10	11	12	12	15	15	15	15	15	17
Total . . .	616	628	635	645	670	688	685	690	696	722

From this it will be seen that in the ordinary membership there has been a net increase of twenty-one (which has not been exceeded since 1903), while the honorary and corresponding memberships have increased respectively by three and two.

The number of new ordinary members elected and registered has again been exceedingly satisfactory, namely, fifty. In addition to these, three were added to the register with date 1908, and the name of one former member was replaced. This is quite a notable influx, speaking well for the position which the Association has attained for itself, and justifying its many spheres of influence.

The resignations of eighteen ordinary members were received and the names of seven others were removed.

The Council regrets to have to chronicle the deaths of eight ordinary members. Their names have already appeared in the obituary column of the January number of the Journal. Among them are the late Dr. Henry Stilwell, who had been a member forty-seven years, and the late Dr. William Ireland, a member of nearly forty years' standing.

The usual quarterly meetings were held in February, May, and November. That in February was, by the courtesy of Dr. Rothsay Stewart and the Committee of Visitors, held at the Narborough new asylum for the counties of Leicestershire and Rutland. The thanks of the Association are due to Dr. Rothsay Stewart for his genial hospitality.

Similar thanks are due to Prof. Bevan-Lewis in connection with a most successful annual meeting, which was held in Leeds and at the West Riding Asylum.

The attendance at all the meetings has been phenomenally good, and the standard of papers has been such as to excite interest and valuable discussion.

Eleven Divisional meetings have been held, at which the attendance has been satisfactory. The membership of the Divisions, as reported to the May Council meeting this year, was:

South-Eastern	249
Northern and Midland	150
South-Western	103
Scottish	88
Irish	59

The Council has had under consideration a proposal for giving Divisional prizes for best papers read by assistant medical officers, with a view to encouraging original work among them.

The Criminal Procedure Committee has not found it necessary to meet.

The British Committee of the proposed International Institute for the Study of the Causes of Insanity has continued to meet, and presents a report. A summary of its history and the present position of matters in connection with it is communicated in the current number of the Journal.

A Preliminary Committee upon the Medical Inspection of School Children was formed in May. It has held two meetings, and presents a report.

The Educational Committee, under the chairmanship of Dr. Mercier, has had an unusually busy year—mainly in the relation to the new regulations for the nursing certificate. In addition, it has been actively urging forward, through its Sub-committee, the scheme for the granting of the proposed degrees and diplomas in psychological medicine by the universities and other qualifying bodies.

The Parliamentary Committee, under the chairmanship of Dr. Bower, has also overtaken much important work, largely in connection with the Asylum Officers' Superannuation Act of 1909, which came into force on April 1st this year. A "Commemoration Banquet" was held in London on December 20th last to celebrate the passing of this Act, at which the special guests were the Right Hon. Lord Monk Bretton, C.B., Sir William Collins, M.D., M.P., and Dr. Shuttleworth.

A Joint Advisory Committee was formed, partly of members of this Association and partly of members of the Asylum Workers' Association, to consider questions in reference to the working of the Act as they might arise from time to time. The Committee has met on many occasions, and it presented a report at the February meeting. It has also since then had several meetings for the transaction of important business. Mr. H. F. Keene, Clerk of the London Asylums Committee, has been good enough to attend its meetings and to assist it materially. It is now taking active steps in certain matters brought before it.

The Journal, under the same experienced editorship, continues to be much appreciated, and its circulation is satisfactory.

The Library Committee presents a report indicative of much activity on the part of its members during the year, and embodying suggestions which are likely to be followed by increased use of the Library.

The proceedings of the Association have on each occasion been presided over by Prof. Bevan-Lewis, who has worthily occupied the Presidential chair with dignity and courtesy.

The finances of the Association, in the same watchful guardianship as heretofore, continue in an eminently sound condition, and the members are indebted to the Treasurer for a valuable report upon the matter presented at Wakefield.

The entries for the nursing certificate during the past year have numbered nearly 1,000, being about the same number as in the preceding year. The Registrar's duties—always heavy—are likely to be considerably augmented by the coming into operation of the new nursing regulations. To him, to the Divisional Secretaries, and other officers, who so ungrudgingly bestow so much of their time to the duties of their offices, the hearty thanks of the Association are due.

In concluding this report, the Council wishes to place on record its high appreciation of the valuable services rendered to the Association by its Hon. General Secretary, Dr. C. Hubert Bond, during the past year. The Council is well aware of the increasing burdens placed upon the shoulders of the General Secretary, and expresses its heartiest thanks to Dr. Bond for the way in which he has carried out these arduous duties.

Dr. PERCY SMITH seconded, and the report was adopted.

#### EDUCATIONAL COMMITTEE.

Dr. STODDART read the report of the Educational Committee, and moved its adoption as follows :

During the past year seven meetings of the Educational Committee have been held, three extra meetings having been necessary in order to get through the new nursing regulations.

The Registrar reports that 183 and 786 candidates presented themselves at the November and May examinations respectively; 111 passed in November and 461 in May.

The work of the Sub-committee appointed to revise the regulations for the training and examination of nurses is now complete, and the new regulations and syllabus have been passed by this committee and by the Association. The new rules for the conduct of the examination in nursing have been duly considered and have received the sanction of the Council.

A sub-committee has prepared a scheme for the teaching of psychiatry and allied subjects, which has passed the Educational Committee and been presented to the Universities and other teaching and examining bodies, with a petition that they may adopt the scheme and grant diplomas in mental disease. The scheme is now under consideration by the Universities and other teaching and examining bodies.

C. MERCIER (*Chairman*).

W. H. B. STODDART (*Hon. Secretary*).

A member asked whether it would be in order for the meeting to hear the report by Dr. Bedford Pierce on behalf of the examiners. After some discussion it was decided not to read this report. In accordance with a recommendation by the Council, it will be printed and sent to all asylum medical superintendents in the United Kingdom.

Dr. BEDFORD PIERCE said the rules of the conduct of the examination were settled, yet the report said that those rules were under consideration. He did not know whether the report included what took place on the preceding day.

Dr. STODDART said the report was prepared for circulation prior to yesterday's meeting, and he did not know whether he ought to include in it the previous day's proceedings.

The GENERAL SECRETARY said it was usual in reading it to incorporate any important work overtaken in the previous day's committee meeting.



Dr. STODDART said he would alter his report accordingly.

Dr. MACPHAIL said he rose to make a point about the rules concerning the conduct of the examination. There was considerable ambiguity as to which members of the staff were eligible for certain examinations. He raised the point at the meeting of the Educational Committee, but it was not thought sufficiently important. But he would like now, in general meeting, to move, that in order to avoid ambiguity in the matter an instruction be that the old regulations be operative for nurses and attendants who entered asylum service prior to November 1st, 1909, provided they enter without delay.

Dr. MILLER seconded.

Dr. STODDART said he thought the resolution was out of order. He regretted that what he had with him was only a draft copy, and the rules were passed at the adjourned meeting last year.

Dr. URQUHART said the record showed that Dr. Mercier's version was passed that after May, 1911, no candidates should be able to present themselves under the old rule.

Dr. MACPHAIL said that was the whole point of his motion, that the rules were passed into law on November 1st, 1909, and one had no right to make it retrospective, and that persons who commenced their studies before then were eligible under the old rules. He wanted a distinct ruling by the Association on the point as to whether persons who had commenced their studies before November, 1909, were not eligible under the old regulations.

The PRESIDENT said he thought that was accepted at the meeting. But probably Dr. Stoddart would be in possession of the particulars.

Dr. MERCIER said there was no doubt it was passed in the sense in which Dr. Stoddart understood it. The object of Dr. Macphail's motion was to rescind that resolution of the Association and substitute another. It had been thought on further consideration that it would produce some injustice upon attendants who had entered the service of the asylums under the old regulations, and in the belief that they would be examined under the old regulations if they were now compelled to submit to the new regulations. Whether that was a matter which the Association ought to take into consideration, whether attendants who had entered the service and had had opportunities and time to pass under the old regulations, should not be compelled, now that they had neglected that opportunity, to take the diploma under the new regulations alone, was a matter for the consideration of the Association. But it did not appear that the regulation as it now existed would be retrospective to that extent, but that attendants who entered in the belief and on the understanding that they would be examined under the regulations as they then existed, would have a new set of regulations imposed upon them; and it was to provide that all those entered under those conditions would be examined as if the new regulations had not taken place, that Dr. Macphail's resolution was proposed. He would not wish the Association to rescind such a deliberate opinion which it arrived at, were it not that the amendment was supported by the Registrar, who was more experienced in those matters, and whose opinion on them was more entitled to weight than that of any other member of the Association. As the Registrar had seconded the resolution he would withdraw any opposition which he otherwise might feel.

Dr. URQUHART asked for the decisive date, and if it was in the report by Dr. Stoddart.

Dr. STODDART said that after May, 1911, no candidates will be able to present themselves under the old rule. In the rules themselves were the words, "The first preliminary examination will be held on the first Monday in November, and the first final examination under the new regulations will be held on the second Monday of November, 1911." Therefore there would be no single examination in November, 1911.

Dr. MERCIER said there was another matter of very great importance which arose, and to which, as soon as the present matter was disposed of, he would like to draw attention.

The PRESIDENT said it was advisable to point out, as Dr. Mercier alluded to it, that rescinding any resolution like this would be out of order unless due notice were given. He read the rule covering such matters. He then put the resolution as follows: "That all nurses and attendants who entered the asylum services prior

to November 1st, 1909, be eligible to enter for the nursing examination under the old regulations."

Dr. MILLS said that left it open for the attendant who entered before 1909 to present himself or herself at any time for the next thirty years, and they could demand to be examined under the old regulations. He was with Dr. Macphail in trying to get a slight extension, but was opposed to extending the time indefinitely, as the resolution did.

Dr. MACPHAIL said he was prepared to alter it to a limit of two years. He did not want to make it indefinite. He would be agreeable to putting in "Up till 1912," or any words which would have that effect.

Dr. PERCY SMITH said he thought Dr. Macphail meant that after two years candidates who had not availed themselves of the privilege should no longer be able to do so.

The PRESIDENT said he understood that was what was meant.

The resolution was read as follows:

- "That all nurses and attendants who entered the Asylum Service prior to November 1st, 1909, be eligible to enter for the Nursing Examination under the old regulations, provided they present themselves for examination on or before November, 1912."

The resolution thus amended was carried.

Dr. MERCIER said there was another matter in connection with the regulations which the meeting might consider—a very important one indeed. In the report of the meeting at which those regulations were adopted, Clauses 4 to 14 inclusive were passed without comment. Among those was Clause 11, which provided that a nurse should not present herself or himself for the preliminary examination who had not attained the age of twenty-one. What was in the original draft was that it was the final examination at which the nurse must have attained the age of twenty-one and not at the preliminary. If a nurse must have attained twenty-one years of age at the preliminary examination, that would certainly reduce the number of candidates at the preliminary examination very largely indeed, and it would postpone the attaining of the diploma until the age, in many cases, of twenty-three or twenty-four. How and when the alteration took place he did not know, but it appeared in the printed draft in one form, and in the resolutions which were passed by the Association in another form, and yet it did not appear by the report that any alteration was made by the Association. It might be a printers' mistake, but it was desirable that the Annual Meeting should regularise it. Therefore he proposed that the age of the candidates should be not less than twenty-one years when he presented himself for the final examination, instead of that being the age when he sat for the preliminary examination, as it now appeared in the regulations.

Dr. STODDART seconded.

The PRESIDENT said he thought the resolution would be supported by the feeling of the meeting.

Carried.

#### THE TREASURER'S REPORT.

The TREASURER (Dr. HAYES NEWINGTON) said his report was in the hands of the members, and there was very little he need say in addition. The auditors visited him the other day and found everything correct, as they would tell the meeting. There was a large amount under the heading of "miscellaneous," but it was chiefly made up of £78 in regard to pensions, *i.e.*, the half share of legal expenses, shared with the Asylum Workers' Association, and expended in the Commemoration Dinner, at which the Association entertained the people to whom they were so grateful for aid in Parliament and outside. There was a payment of £58 for the index, entertainment of guests at the Annual Dinner and the provincial dinner, and a considerable amount of committee printing. As he said last year at Wakefield, the Association could not grudge any amount of money spent on committees doing the work of the Association. There had been a great advance of late years in accurately reporting the work of the meetings for future use. He moved the adoption of the report as follows:

# THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—For the Year 1909.

## REVENUE ACCOUNT—January 1st to December 31st, 1909.

1908.	Dr.	Expenditure.		Income.		Cr.		1908.	
		£	s. d.	£	s. d.	£	s. d.	£	s. d.
337	0 6	To Journal—Printing, Publishing, Engraving, Advertising, and Postage ...	476	8 6	By Dividends ...	...	...	39	9 11
992	6 3	" Examinations, Association Prizes, and Clerical Assistance to Registrar ...	129	13 6	" Sale of Journal ...	...	...	210	0 0
47	12 3	" Petty Disbursements, Stationery, Postages, etc. ...	55	13 3	" " Handbook ...	...	...	50	9 6
135	13 10	" Annual, General, Special and Divisional Meetings ...	139	19 7	" " Statistical Forms, etc. ...	...	...	23	11 10
56	2 6	" Rent of Premises at 11, Chandos Street, care of Office, etc. ...	56	0 0	" Advertisements ...	...	...	307	14 4
6	6 0	" Audit and Clerical Assistance ...	6	6 0	" Fees, Certificates of Psychological Medicine ...	...	...	15	15 0
91	15 5	" Miscellaneous ...	206	18 2	" " Certificates of Proficiency in Nursing ...	...	...	240	14 0
1066	16 11	Balance ...	1070	19 0	" Subscriptions ...	...	...	729	4 6
226	15 4		246	3 9					
£1293	12 3		£1317	2 9				£1317	2 9

## BALANCE-SHEET—31st December, 1909.

1908.		Liabilities.		Assets.		1908.	
£	s. d.	£	s. d.	£	s. d.	£	s. d.
33	18 6	Journal Account, balance of ...	0	18 7	Lloyd's Bank:—Bankers ...	...	...
12	3 0	Petty Disbursements Account, balance of ...	16	8 10	New Zealand Stock, 3½ per cent., value at this date ...	...	...
56	3 8	Examinations Account, balance of ...	...	...	Do. (Hack Tuke Memorial) ...	...	...
21	9 10	Meetings Account, balance of ...	15	8 5	Victoria Stock, 3 per cent. ...	...	...
16	4 11	Rent Account ...	14	0 0	Do. 3½ per cent. ...	...	...
14	2 6	Gaskell Fund ...	1	6 8	Manchester Corporation Stock, 3 per cent. ...	...	...
30	5 8	Miscellaneous ...	49	7 3	New South Wales Stock, 3½ per cent. ...	...	...
21	12 0	Library ...	32	4 5	Midland Railway Preference Stock, 2½ per cent. ...	...	...
206	10 1	Balance:—Balance on 1st January ...	1734	13 8	Sales Account, balance ...	...	...
		Add: Balance of Revenue Account ...	246	3 9	Subscriptions Account, balance ...	...	...
		Increase value of Investments ...	2	4 10	Fees Account, balance ...	...	...
		Deduct: Subscriptions written off ...	1983	2 3	Examinations Account, balance ...	...	...
			...	36	15 0		
			1983	2 3			
			1946	7 3			
			£2086	11 5			

WORTHINGTON & BOLT, C.A.

H. HAYES NEWINGTON, TREASURER.

## GASKELL MEMORIAL FUND.

1909.			1909.		
July 22nd,	Dr. Devine	£ s. d.	July 1st, Balance	...	£ s. d.
	(prize) ...	45 0 0	Dividends	...	44 10 3
	Dr. Grills		Oct. 2nd "	...	22 15 0
	(additional		1910.		
	prize) ...	15 0 0	Jan. 2nd "	...	4 15 5
Aug. 10th,	Medal	...	April 2nd "	...	22 15 0
	Examiners'	...			4 15 5
	Fees	4 4 0			
	Expenses	1 5 0			
1910.					
June 30th,	Balance	...			
		28 17 1			
		<u>£99 11 1</u>			<u>£99 11 1</u>

H. HAYES NEWINGTON, TREASURER.

Dr. CLOUSTON seconded. In doing so he said he had often been a critic, even of the Treasurer; but he had no criticism to offer this year in regard to the accounts.

The PRESIDENT said he was sure all present would agree with what Dr. Clouston had said.

The report was adopted.

## THE EDITORS' REPORT.

Dr. URQUHART read the editors' report, and proposed its adoption as follows:

The past year has brought no special change in the affairs of the Journal. The volume and quality of the original communications have been well maintained, and there has been some increase in those of a clinical character from the junior members of the Association. It is very desirable that these should be still further extended. We are indebted to Dr. Clouston for having initiated the publication of "Clinical Notes."

The cost of the Journal was considerably below the average of past years, the net cost, after deducting sales and receipts from advertisements, being about £243. The cost, however, fluctuates from year to year, but the average remains much the same as ten or fifteen years since, when the number of copies printed was considerably less. The advertisements still yield a comparatively small sum, and it is very desirable that further efforts should be made to remedy this.

The difficulty in connection with the surplus or reserve copies of the Journal alluded to in last year's report has been met. The Librarian has found additional storage whereby the Library has been relieved, and Dr. Bower has consented to continue the storage of those which are already in his care. The thanks of the editors and of the Association are due to Dr. Bower for the care and trouble that he has taken in this matter for many years past, and specially in selecting and forwarding such copies as are purchased from time to time.

The thanks of the editors are also due to Dr. Lord for his able assistance during the past year, as well as to the numerous collaborators who assist him in the production of the Epitome.

(Signed) H. RAYNER.  
A. R. URQUHART.  
JAMES CHAMBERS.

Dr. STODDART seconded, and it was adopted.

## PARLIAMENTARY COMMITTEE.

Dr. BOWER moved the adoption of the Parliamentary Committee's report, which all the members, he said, had seen. It had been learned from the report of the Council that an Advisory Committee to help to elucidate the difficult points in the



Act had been appointed, of which Dr. Hayes Newington had been appointed Chairman. Perhaps Dr. Newington would like to say a few words as to what had been done, and what was likely to be done in the matter. He moved that the report be adopted as follows:

*Report for the Year 1909-1910.*

The Committee has met six times and has been chiefly occupied with forwarding the passage of the Asylum Officers' Superannuation Bill, and they are glad now to be able to state that the hope, expressed in their last annual report, that it would become law, has been realised.

Although the Committee are aware that the Act as it stands does not embody all that they desire, they felt it their duty on November 23rd to recommend the Council of the Association to accept the Bill as it then stood, as they felt further attempts at amendments might imperil the whole Bill.

The Registration of Nurses Bill has made but little progress, and it is being carefully watched so as to safeguard the interests of mental nurses, and secure proper representation on any Nursing Council for the Association.

(Signed) DAVID BOWER, *Chairman.*

June 10th, 1910.

H. WOLSELEY-LEWIS, *Secretary.*

Dr. STODDART seconded.

Dr. HAYES NEWINGTON said the Advisory Committee had met several times, and was still holding meetings. In attempting to facilitate a right interpretation of the Act as far as could be done at first, it was evident that a considerable amount of opposition had to be encountered, which chiefly arose from a meeting called by the Commissioners in Lunacy of England, who asked the County Councils' Association and a representative of the Home Office and of the Local Government Board, besides the Association and the Asylum Workers' Association. There was a long discussion, which lasted a good part of the morning and into the afternoon, but they did not get very far. They asked for a definition of some views uttered by the Lunacy Commissioners on the question of classification, but they were not prepared to put them into writing at the time. But since then they had been published by the County Councils Association, and it had to be recognised that in the matter of liberal dealing with the discretion given by the Act under the heading of "classification," the Association had to contend with that body as a very powerful enemy. Directly they saw the terms of the circular they did the best they could by issuing another, and found that some good had thereby been done where doubt existed, though in some places the County Council's circular had done some harm, and in some cases, even after the Visiting Committee had framed a fairly liberal scale, the County Council's letter had arrived and had had a considerable effect on the Committee, so that they revised the matter to the disadvantage of the Staff. It was believed by the Joint Advisory Committee that the Commissioners in Lunacy, in expressing the opinions which were attributed to them—it could not be definitely said they had uttered them—were not giving the right interpretation of the Act. Counsel's opinion had been taken, from that eminent counsel, Mr. Macmorran, on the question of classification, and that opinion supported the views of the Committee. It was certain that the circulars sent out by the Committee had done some good. There was still much possibility of harm, and therefore Dr. Shuttleworth was working practically night and day, helped by the kindness of Sir W. J. Collins, with whom he had had several interviews. It had been hoped to send a deputation to the Home Secretary, but as he had refused to receive one from the County Councils Association, it was concluded he would not receive one from this Association. But they had every hope of being able to get his sympathy in the matter. He had seen that last night Sir William Collins was going to ask a question of the Home Secretary in the House, and that would raise the whole point. He, Dr. Newington, had not yet been able to see whether that had been done. At any rate, the matter was still in the active stage, and no effort would be spared to induce the Home Secretary to exercise any influence he had in restraining what was considered to be an incorrect spirit of rendering the terms of the Act. He did not think he could say more than that, except that they were deeply indebted to Dr. Shuttleworth for his most

persistent work. He and Dr. Bower had worked hard on the matter for months past. It was a curious thing, but he believed it had been said there was a large amount of self-interest in the Association's pressing on the scheme for pensions. But the fact was that the three people who had had for many years past to bear the brunt of the work were entirely free from any interest whatever. He suggested that that fact was extremely good evidence that the work was done simply for the good of the insane.

Dr. CARLYLE JOHNSTONE asked, arising out of what Dr. Newington had just said, whether it would not be possible for the Parliamentary Committee, or the Joint Advisory Committee, to circulate copies of Mr. Macmorran's report to all superintendents in Scotland. Very few of them at present appeared to have seen it. It was a most valuable document, and it supported what a few of the superintendents in Scotland had been fighting for. It was matter for regret that it was not earlier in the hands of superintendents and of district boards in Scotland. He supposed it would be possible to send each of them a copy.

Dr. NEWINGTON rejoined that the difficulty was that counsel's opinion was sometimes double-edged, therefore it was necessary to be careful. But he was in correspondence with Dr. Shuttleworth, and they were going to see Mr. Macmorran on Monday. Any decision would affect Scotland as well as England. What was good law in the one country was good law in the other, and if the Home Secretary could be got to put his foot down and say the Act should be carried out as they conceived it should be there was nothing to fear.

Dr. CARLYLE JOHNSTONE said that if the counsel's opinion supported the opinion held in Scotland it was regrettable that the Scottish members were not in possession of it. He had it himself, and it had been of great use to him. But nobody else seemed to have had it in Scotland, and he feared it was too late now to protect their interests in Scotland, because the General Board did not see eye to eye with them, and their views were likely to have an adverse influence with regard to the interests of the subordinate officials. If the document was not confidential, the opinion of Mr. Macmorran could be sent to all the superintendents in Scotland, who should have copies to show to members of their Board. The effect of that would be good. But if that was not done immediately it would be too late.

Dr. HAYES NEWINGTON said the points mentioned were well within the cognisance of the Committee, and there was a desire not to do mischief. There were many asylums comfortably settled, and there were a few who could be helped. But one must not help a few at the expense of the many, and they had to be careful how the material was handled. He must ask the members to leave the matter in the hands of those who had studied it, and who knew what they were doing. He could give the meeting reasons why it was necessary to be careful, and they were fortified in that position by very superior advice.

Dr. CARLYLE JOHNSTONE complained that when there was material which it would be wise and well to forward immediately to Scottish superintendents they did not get it until they asked for it. Scotland had been rather left out in the cold in that matter.

Dr. NEWINGTON said that was not so. The Association had asked Scotland to come and help them, but there had not been much help forthcoming. He promised that directly after the conference with Mr. Macmorran on Monday, which would take him home before he had hoped to go, the information available would be sent.

Dr. CARLYLE JOHNSTONE said he did not wish to make any reflection on what Dr. Newington or any other member of the Committee did; the point was that Scotland was being circularised by the English County Councils Association, and was not being circularised by the Medico-Psychological Association, and so they remained in the dark in regard to the latter. If it were not for a few men trying to disseminate light in Scotland, they would be absolutely in the dark there. He therefore asked Dr. Newington to give some consideration to what he had said.

Dr. BOWER thought, as a member of the Advisory Committee, that they should very carefully consider the advisability of sending the circulars which were drawn up to all asylum committees, or only to those committees where it might be helpful. It was decided to send it only to the committees where it would do good, and where a decision had not already been come to.

Dr. THOMSON said Dr. Carlyle Johnstone might be under the impression that English superintendents had been supplied with the information to the exclusion of the Scottish superintendents. He, Dr. Thomson, had not heard any more about it than Dr. Johnstone had.

The report of the Parliamentary Committee was adopted.

#### REPORT OF LIBRARY COMMITTEE.

The GENERAL SECRETARY, in the absence of the Chairman of the Library Committee, moved the adoption of the report, as follows:

During the past year a considerable number of books have been added to the Library. They consist of the more recent works, both English and foreign, relating to the various aspects of psychiatry, and a complete list has already been published in the Journal. In addition to this the annual subscription to Lewis's lending library has been doubled, as it has been found very convenient for obtaining books which do not happen to be in the Library of the Association.

It is satisfactory to note a marked increase in the number of books borrowed for reference by the members of the Association. This is no doubt attributable to the notice which has been inserted in each number of the Journal.

While the recent additions to the Library have largely brought it up to date, there are still a number of books which should be included in a library of this character. It is therefore proposed to request a further grant of £40 from the Council. Should this be forthcoming a portion of the sum will be utilised in the purchase of new books, and the rest will be devoted to the binding of some 140 volumes which are already in the Library. Many of these unbound books are of considerable value and interest, and in their present state tend to become torn and destroyed.

It was found that there were a large number of unbound volumes of old journals in the Library. Unfortunately the majority of these are incomplete and therefore quite valueless for purposes of reference. All such have been discarded, as they only served to absorb much-needed accommodation. Complete volumes were retained, and possibly the missing years might be purchased at some future date in order to complete the sets. In most cases, however, so many volumes are lacking that the expense would be very considerable, and it is scarcely advisable to attempt to replace them at present while money is required for more immediately pressing needs.

The removal of a quantity of useless material has been the means of affording a considerable amount of space for new books. The question of increased accommodation is, therefore, not one of immediate urgency, though it will ultimately have to be considered as the Library increases in size.

Suggestions as to the purchase of new books will be welcomed by the Committee, and it is hoped that the Library will be found increasingly useful to the members of the Association.

(Signed) HENRY RAYNER, *Chairman.*  
                   H. DEVINE, } *Hon.*  
                   B. HART, } *Secretaries.*

This was seconded and carried.

#### REPORT OF AUDITORS.

In the absence of both the auditors Dr. BOND read the following report, and moved its adoption, which was carried:

The Auditors beg to report that they have examined all the accounts and seen the vouchers, and in all cases they have found them correct. The auditors note that at the beginning of the year there was a considerable balance due on account for advertisements, and this has now been cleared off and a new system has been started whereby the moneys due will be paid quarterly instead of as received by the advertising agent. The income from the Handbook was £50 9s. 6d., as against £46 19s. in 1908. The income from the advertisements in the Journal was £23 13s. 10d. The balance owing from members' subscriptions is less than last year. The auditors note with satisfaction that the increase for the year is a record

one, *vis.*, £211, and this in spite of the additional expense which the Association undertook in connection with the new Pension Act, *vis.*, £78, and the expenditure of £58 12s. on the index of the Journal. During the year, £400 was invested out of the savings of the Association. The total investments (irrespective of the Gaskell Fund) now stand at £1702 6s. 1d., this sum being the price of stock on December 31st, 1909. There was a slight net increase in the value of the stocks as compared with the previous year.

The Treasurer is to be congratulated on the finances and the various accounts of the Association.

(Signed) MAURICE CRAIG.  
JOHN R. LORD.

#### REPORT OF CRIMINAL PROCEDURE COMMITTEE.

Dr. URQUHART said that, so far as he was aware, nothing had been done in the matter during the past year. It was generally felt that with so many Parliamentary reports, and the likelihood of the Government taking action, it would be well to see what action would be taken by the Government before going further.

#### REPORT OF THE PRELIMINARY COMMITTEE *re* THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

*Report to the Council by the Committee appointed by it on May 24th, 1910.*

The Committee consists of Drs. C. Hubert Bond, A. G. Foulerton, H. Hayes Newington, H. Rotherham, James Scott, G. E. Shuttleworth, and F. R. P. Taylor. Each of the meetings held has been attended by the whole Committee.

The following is a reference to the Committee:

"To inquire into the propriety of the Association framing and tendering to authorities advice on the search for and the definition of mental deficiency which is incompatible with retention in elementary schools, with suggestions for the appropriate treatment of such deficiency, and to consider any other cognate matters. The committee to have power to make inquiries in any direction it may consider to be desirable, and to report to the Council, and, if the Council approves, to the annual meeting in July, and to co-opt, if it please, other members."

The Committee has unanimously arrived at the following conclusions:

(1) It is of the opinion, after careful consideration, that the Association cannot help school medical officers by laying down definite criteria, whereby to differentiate between merely dull or backward children and mentally deficient children; and it further considers that it is most desirable that authorities should arrange for facilities being provided for consultation in doubtful cases between school medical officers and the medical superintendents of county and borough asylums, or other recognised experts.

(2) It thinks that in all cases of mental deficiency provision should be made for a continuous history of the case being kept as long as the case is under official supervision.

(3) When a mental defective passes from under the care of the Education Committee, having been maintained at a special institution, a report by a mental expert should be made to the local authority.

(4) It is desirable that medical superintendents of county or borough asylums should be empowered to communicate with school medical officers about any cases under their care, whose children are attending elementary schools under the supervision of those officers.

(5) It is desirable that in cases of mental deficiency the age at which the supervision of the Education Committee ceases should be extended to twenty-one years.

(6) The Committee is firmly of the opinion that there should be provision for supervision of mental defectives after they cease to be under that of the educational authority.



(7) The following questions, among others, need further inquiry and consideration:

(a) Is the expense attending the education of mental defectives, as at present conducted, justified by the results?

(b) If the recommendation contained in paragraph 6 is adopted, what suggestions can be made for the best practical methods of carrying it out?

Finally, the Committee is of opinion that its preliminary inquiries justify its recommending to the Council and the Association that a further and larger committee should be appointed to which this report should be referred, with the same duties and powers as were conferred on itself. The new committee to report to the Association at its next annual meeting and to the Council in the interim as may be found necessary.

Signed on behalf of the Committee,

H. HAYES NEWINGTON, *Chairman*.

C. HUBERT BOND, *Secretary*.

July, 1910.

Dr. HAYES NEWINGTON, speaking of the work of this Preliminary Committee, said the history was that two years ago, when the Children's Act was passed, he brought before the Council of the Association the possibility that when the importance of the mental side of medical inspection of children became evident great attention would be paid to the matter, and that the Association might be of use in helping the authorities to formulate their schemes. But times moved very fast, and authorities framed their scheme before anybody could say much about it, and so the matter dropped. A little time ago he was talking with the Medical Officer of Health in Sussex, a member of the Association, who took a skilled interest in the matter, and eventually he, Dr. Newington, said he would bring the matter before the Council. That gentleman wanted to know if there was any possibility of the Association being able to help the school medical officers in arriving at a conclusion as to where the difference lay (and how to find it) between the defective and the ordinary backward child, because important questions had to be settled by those officers with no very perfect knowledge. He had, therefore, brought the subject before the Council at the last meeting, and suggested that a preliminary committee should be appointed to consider the matter, and, if necessary, bring it forward again. The committee was small, but it represented various interests—medical, county councils, and criminal. The matter had been thoroughly thrashed out once or twice from all points of view, and the unanimous conclusion came to that they ought to report to the Council in the first instance, and to the annual meeting further if the Council concluded, as it had concluded, that it would be advisable to do so. The idea was to appoint a larger and more permanent committee to go into the subject. He did not think there could be any doubt as to the advisability of that, because there was no other body in the United Kingdom which could tackle the question. The Commission on the Feeble Minded, whose work would be very much in evidence in all the inquiries, was really dead, and there was no further inquiring power on its part. The Committee thought it could be of use in considering the forms of institutions and treatment which could be advised for all the backward children, and he would point out the excellent work which had been done by Dr. Rotherham at Darenth. Dr. Rotherham had shown what could be done in the beneficial education of defectives, and the Association might be able to help others, with Dr. Rotherham's aid, and suggest beneficial and productive forms of training for children who were not too advanced in mental defectiveness or morally backward. He might say that one result of the preliminary inquiry was that he had observed that many of his colleagues were very ready to look at the subject from the mental point of view; but it was desirable that one or two others on the committee who were not mental experts should inquire into the matter from the other side. Members of the Association were inclined to look at defectives as products of the disease which was their special study. A different view was possible if one looked upon defectives as normal children gone wrong. At all events it was found very useful to have an interchange of opinion between themselves and those who were not mental experts. Among the gentlemen it was proposed to elect was Dr. Auden, the Medical Superintendent of the Educational Committee, Edmund Street, Birmingham. He would be an extremely valuable man to have on the Committee, and he had written to him on the subject. It was important that such an inquiry

should be a joint one. If the Association thought fit to appoint that committee he would propose to move another resolution after the present one, that the committee be selected by the President, Past President, and the President-elect, Dr. Drapes, Dr. Bond, and himself. Thus every portion of the United Kingdom would be represented. Although the Acts which would have to be taken into consideration at first referred only to England, yet the trend of public opinion, and especially the report of the Commission on the Feeble Minded, showed that the interest in the matter was extending into Ireland and Scotland. And no doubt what would be found to be of service in England would be equally serviceable in the other divisions of the United Kingdom. He moved the adoption of the report of the Provisional Committee, and at the same time moved that the Association appoint a more permanent committee to conduct inquiries.

Dr. CLOUSTON seconded.

The PRESIDENT said that carried with it the appointment of the Selecting Committee to report.

Agreed.

Dr. THOMPSON asked whether the Committee had powers to co-opt others from outside the Association.

The PRESIDENT replied that that was provided for in the report as it now stood.

#### NATIONAL COMMITTEE *re* THE CAUSATION OF INSANITY.

Dr. PERCY SMITH said he regretted that the Secretary of the Committee, Dr. J. H. MacDonald, of Govan Asylum, had not been able to attend, as he was just recovering from a severe attack of influenza. He could state, however, that matters were much in the same position as when last reported. They had been waiting initial action by the Italian government, and it was now possible that some action might be taken following the forthcoming Berlin Congress.

#### BERLIN INTERNATIONAL CONGRESS.

The PRESIDENT mentioned that a Congress was to be held at Berlin on October 7th, and it was thought desirable that the interests of the Association should be represented at it. Dr. J. H. MacDonald, Dr. Percy Smith, and Dr. Macpherson were going, and it was for the meeting to say whether it wished them to be delegates for the Association.

Dr. PERCY SMITH said it was usual on such occasions to give to the President and General Secretary power to send as delegates of the Association any member who might be going.

The PRESIDENT said if there were any other members going he would be glad to invite their co-operation.

Agreed.

#### HOUSING COMMITTEE.

Dr. BEDFORD PIERCE said that some years ago a special Committee was appointed to inquire as to the possibility of acquiring new quarters for the Association in London. He had not heard whether that Committee had reported. The little room set apart for the Association was a disgraceful place for the purpose, and he thought that in such a large city a better room should be found for the Association, which was continually growing in importance and wealth.

Dr. BRISCOE desired to support the remark of Dr. Bedford Pierce. He had often attended meetings there when the room was very crowded, and the atmosphere had not been free from impurities.

Dr. PERCY SMITH said there was a Committee, to which Dr. Newington also belonged, and trouble was taken to find out what could be done. At that time the Medical Society of London had a scheme for adding another storey to their building, but that scheme was based on a supposition that this Association would pay about £150 a year. That, however, was beyond the finances of the Association. It would be very difficult to find another place where committee rooms of that kind could be obtained. It was true that the Library was in a small room,

which was scarcely suitable for the enlarged Educational Committees. The Council met in a good-sized room, and so did the general meeting. The rooms of the Royal Society of Medicine were fully occupied, and that Society was in temporary quarters, and so they could not do anything in the matter.

The PRESIDENT said he could inform the meeting that the Housing Committee was still alive, and Dr. Newington would be pleased to revive it still more by bringing that question before it.

Dr. NEWINGTON said the negotiations were not yet dead. The landlords found some difficulty in the matter, independent of whether the Association became tenants, and it was possible they might have modified the scheme. But the rent proposed at the time was more than the Association could afford.

#### QUARTERLY MEETINGS.

Tuesday, November 15th, 1910; Thursday, February 23rd, 1911; Tuesday, May 23rd, 1911; and for the Annual Meeting, Thursday, July 20th, 1911.

#### DIVISIONAL MEETINGS.

*South-Eastern Division.*—Wednesday, October 5th, 1910; Tuesday, April 25th, 1911.

*South-Western Division.*—Friday, October 28th, 1910; Friday, April 28th, 1911.

*Northern and Midland Division.*—Thursday, October 20th, 1910; Thursday, April 27th, 1911.

*Scottish Division.*—Friday, November 18th, 1910; Friday, March 17th, 1911.

*Irish Division.*—Saturday, November 5th, 1910; Thursday, April 27th, 1911.

Dr. THOMSON desired again to point out that the Annual Meeting of the Medico-Psychological Association clashed with the representative meeting of the British Medical Association. Last time he brought the matter forward he was told it would receive the attention which it deserved. Evidently it was inconvenient to the powers that be, because here again he and other representatives of the British Medical Association were prevented from enjoying the meeting to the full. He presumed the matter had been given attention.

The PRESIDENT said the subject had received attention, but considerable inconvenience had been found in adopting the alternative. He could only refer Dr. Thomson to the incoming president, who alone could settle the matter for the coming year.

Dr. BEDFORD PIERCE confirmed the difficulty mentioned by Dr. Thomson, and said that it would be desirable to hold the annual meeting in May.

Dr. MILLS desired to associate himself with what Dr. Thomson had drawn attention to—the clashing of the meetings of the British Medical Association with those of this body. He also had found it exceedingly difficult to attend the meetings he wished to, and he would be glad if arrangements could be made to avoid a similar clash in the future.

Dr. URQUHART said he was glad to know that the question was still alive. He had been hammering at it for thirty years off and on, and he thought it high time that the Association should again consider whether they would go on spoiling the British Medical Association meetings to the best of their ability, and suffering the abstentions which occurred in this Association every year. He had repeatedly suggested the month of May for their Annual Meeting. A total revision of the matter was required.

Dr. NEWINGTON said it was scarcely this Association which was causing the trouble; it was a case of the wolf and the lamb. At one time the British Medical Association confined itself to one week and the Medico-Psychological took another week. It was a new departure for the British Medical Association to take days in the preceding week. The question had been debated many times. There used to be some idea that those in asylums made arrangements for someone to be in charge during their absence, and could better arrange to go from one series of meetings to the other.

Dr. PERCY SMITH said to those who were engaged in teaching in the medical schools May would be a very inconvenient month. At the end of July, however,

the summer session was over and they could get away. But they could not get to a provincial meeting in May.

The PRESIDENT said he wondered whether it would be sufficient if one got the incoming president to promise to give careful attention to the matter, or whether it was desired that a committee should be appointed to consider the whole subject. Dr. Urquhart's recommendation that the date of the meeting should be changed from July to May was a very radical one, and there were various difficulties in the way.

Dr. THOMSON said that Dr. Urquhart suggested too much. All that he asked for himself was an alteration of twenty-four hours.

The PRESIDENT said he was sure the matter would receive due consideration. If members felt satisfied with his assurance on the point the subject might drop.

Dr. URQUHART said the incoming President must be consulted, because his arrangements were paramount, and the Association would naturally come as near as possible to what he desired. In the year of Dr. Conolly Norman's presidency the Association met early in June, and that meeting was a great success.

Dr. MERCIER said Dr. Thomson always brought the motion up before the Association, and he was always told he must apply to the President-elect. He did not know that Dr. Thomson ever did that; he had not heard that he did so, but he always ventilated the subject again at the annual meeting.

Dr. THOMSON rejoined that he did not think it was for any single humble member to make an appeal for an alteration simply to suit his own convenience. That would be asking too much, but it was for the Executive of the Association to bring the notice forward.

The PRESIDENT said he would have pleasure in trying to influence Dr. Drapes on the point.

Dr. PERCY SMITH asked how many members of this Association were on the Representative Board of the British Medical Association, and whether their connection was a permanent one.

Dr. HAYES NEWINGTON asked what the President would commend to Dr. Drapes—a Wednesday meeting, or a Thursday?

The PRESIDENT said he would not recommend that the meeting be held in May.

Dr. DRAPES said he was sure the Irish Division would be only too happy to try and accommodate their plans for the meeting to the views of most of the members, and it would be a cause of regret that any should be debarred from coming by other engagements. He did not know, however, that it was left to the President to decide on his own judgment. He thought it was the result of conferring with the Council, finding from them the date which would best suit the members generally.

Dr. BOWER asked whether the date, July 20th, 1911, was fixed with the new President for that time.

Dr. BOND replied in the affirmative, but added that it was only put forward as a suggested date and subject to the convenience of the President-elect.

Dr. URQUHART suggested that it was not absolutely essential to agree to July 20th, 1911, and asked whether the day of the month could not be left out. Would Dr. Drapes consider the whole subject?

Dr. DRAPES replied that Thursday, July 20th, was not originated by him, though he agreed it was convenient.

The PRESIDENT said it was subject to modification afterwards.

#### ELECTION OF ORDINARY AND HONORARY MEMBERS.

The PRESIDENT nominated Dr. Bedford Pierce and Dr. Stoddart to act as scrutineers, and suggested that it would be well to take at the same time the election of honorary members.

Dr. PERCY SMITH said the first candidate for the honorary membership was Dr. John Macpherson, whose proposal form was signed by Dr. Clouston, Dr. Urquhart, Dr. Yellowlees, Dr. Bevan-Lewis, Dr. Hayes Newington, and himself (Dr. Smith). He said Dr. Macpherson was Commissioner in Lunacy for Scotland, formerly Assistant Medical Officer, Royal Edinburgh Asylum, Lecturer in Mental Diseases, Royal School of Medicine, Edinburgh; Morison Lecturer before the Royal College of Physicians, Edinburgh; author of *Mental*



*Affections*, 1899, and numerous medical articles of importance. It would seem hardly necessary in Edinburgh to recommend Dr. John Macpherson for the honorary membership, but perhaps it was appropriate that someone from the south should be allowed to perform that office, and it was an honour to him to have that duty entrusted to him. He thought he might say that Dr. John Macpherson was known in London and the south generally almost as well as he was known in Edinburgh. His text-book on mental affections was, of course, extremely well known; and it might be said that of the text-books in the English language it bore more impress than many of familiarity with continental work on the subject. Dr. Macpherson was a member of the Classification Committee, which met a great deal two or three years ago, and drew up the classification for the purposes of the Association, and his knowledge and wise counsel were of the greatest possible assistance, and all members working with him became familiar with his genial personality. It had also been his good fortune to be associated with Dr. John Macpherson as a Delegate to the Congress and the International Committee held in Vienna in 1908. The report of that Congress, published in the *Journal* for July, bore very largely the impress of the judicial mind. By the retirement of Dr. Fraser from the office of Commissioner in Lunacy for Scotland Dr. John Macpherson now became the senior Commissioner, and he might be allowed to say that Scotland was fortunate in possessing such a senior Commissioner. The Association would be as fortunate if his name were added to the list of honorary members as it would be in having him as President at the meeting that afternoon.

Dr. SAVAGE said it might seem unnecessary for anyone to support what Dr. Percy Smith said, but he did so with the greatest pleasure. He felt the Association was conferring an honour upon itself by honouring Dr. Macpherson.

The motion was carried.

The PRESIDENT said he had now the pleasure, after Dr. Percy Smith's speech nominating a medical commissioner, of nominating a legal commissioner for England, namely, Mr. Arthur Hill Trevor, as honorary member of the Association. Mr. Trevor was a Graduate in Arts at Oxford University, having been educated at Winchester and Corpus Christi, Oxford. For three years he had acted as Secretary of the English Lunacy Board, and had been a Commissioner for England and Wales. Most of those present had been brought into association with him officially, and all who knew Mr. Trevor would agree as to his independent judgment, his breadth of view, and his force of character. His criticisms were always kindly and generous, and free from untoward bias, and was coupled with a keen recognition of administrative duties. He approached a case with the greatest sympathy, and the same sympathy was extended to all that was progressive in lunacy administration. It would be a very graceful act on the part of the Association to enrol Mr. Trevor's name on the list of honorary members, and therefore he hoped the meeting would support him.

After the ballot it was announced from the chair that the honorary members had been elected, namely, Dr. John Macpherson and Mr. A. Hill Trevor.

The following were elected as ordinary members:

Auden, George Augustus, M.A., M.D., B.C. D.P.H. Cantab., M.R.C.P. Lond., F.S.A., Medical Superintendent, Educational Committee, Edmund Street, Birmingham (proposed by Bedford Pierce, Geoffrey Clarke, and C. Hubert Bond).

McKenzie, Ivy, M.B., Ch.B. Glas., Director, Western Asylums Research Institute, Glasgow (proposed by L. B. Oswald, R. M. Marshall, and H. Morton).

Oldershaw, George Francis, M.B., Ch.B. Liverp., Assistant Medical Officer, Royal Asylum, Perth (proposed by A. R. Urquhart, John H. Lyell, and B. J. Alcock).

Reid, William, M.A. St. And., M.B., Ch.B. Edin., Senior Assistant Medical Officer, Burntwood Asylum, Lichfield (proposed by J. B. Spence, H. Hayes Newington, and C. Hubert Bond).

Watson, William Scott, M.B., Ch.B. Edin., Assistant Medical Officer, Royal Asylum, Morningside, Edinburgh (proposed by George M. Robertson, Alex. W. Neil, and R. Dods Brown).

#### NOTICES OF MOTION.

The PRESIDENT announced that Dr. Bond desired to withdraw the motion (H) in his name for the present. The motion had reference to the number of examiners.

## MOTION BY DR. BOWER.

Dr. BOWER proposed the following, of which he had given notice: "That the member holding the office of Secretary to the Parliamentary Committee be an Official Member of the Council, and that Bye-law 31 be varied accordingly." He said it had often been an inconvenience to the Chairman or Secretary of the Parliamentary Committee, who had not been able to follow up the business of the Parliamentary Committee of the Council. He had intended to suggest the addition of the Secretary to the Educational Committee.

Dr. BOND said that gentleman was already, *ex officio*, a member of the Council.

Dr. BOWER said he also used to be under that impression, but failed to see his name in the list of officers that had just been elected.

Dr. BOND explained that his name could not yet appear as that officer had to be elected at the first meeting of the Educational Committee, namely, next November, and that he then, by Bye-law 31, became, *ex officio*, a member of the Council.

Dr. BOWER said he simply wanted to put the Parliamentary Committee on all fours with the Educational Committee.

Dr. BEDFORD PIERCE seconded the motion and it was carried.

## MOTION BY THE TREASURER.

Dr. HAYES NEWINGTON proposed the following motion: "That new members elected in the last half of any year shall have the option of joining the Association as soon as their election is complete, or of deferring joining to January 1st of the succeeding year, and that Bye-law 19 be varied accordingly." He said the present arrangement was very inconvenient. Sometimes new members were elected at a November meeting and they were due to pay half a guinea. They might consider it hardly worth their while to join, and they sometimes did not come on until the following year. Dr. BOND had found a difficulty with regard to them, and they sometimes upset the accounts. He moved the resolution in order that what new candidates did now illegally they should be able to do legally.

Dr. BRISCOE seconded, and it was carried.

## THANKS TO THE PRESIDENT AND RETIRING OFFICERS.

Dr. CLOUSTON said he had been asked only two minutes ago to propose a vote of thanks to the President. Though it was difficult to do justice to such a vote at two minutes' notice, he realised fully that the work of the President and other officers was so well known that no eulogium was really necessary. He knew the President to be a modest man, and probably what he was about to say would bring a blush to Dr. Bevan-Lewis's cheek, but he said in the face of all men and all women that Professor Bevan-Lewis was the most outstanding and most distinguished man in the profession on the pathological aspect of insanity, and in that statement he did not include Great Britain only. The work which Professor Bevan-Lewis did from the time he first went to Wakefield, his devising of a new method of microscopical examination of the human brain, his continuous and never-ceasing work from that time to the present, had produced fruits which were reflected in the progress of psychiatric science, and the Professor had writ his name large in the history of that department of medical work for all time. There were not many men of whom he could say that, but he said it now with the conviction that every man in the room agreed with him. Dr. Bevan-Lewis, having done such a great work, conferred an honour on the Association by accepting its presidency. He was not sure that it was altogether with Dr. Bevan-Lewis's will. Several members of the Council had to exert considerable pressure on Dr. Bevan-Lewis to induce him to accept the post, but as President he had done all that any man could do as head of the Association. The address delivered from the chair last year was of the most scientific character, implying thought and work. It had Bevan-Lewis written all over it, from beginning to end. With regard to the officers of the Association, he could not mention them all; they were all good men. But he could not omit mention of his old friend and a former assistant, Dr. Hayes Newington, the Association's Treasurer. To everybody to whom he introduced Dr. Newington he had to say that he was the real man holding the rod of

the Association : he ruled everybody and without a single complaint. He also held the purse-strings, and had a masterful presence, and whenever anybody thought of the Medico-Psychological Association, Dr. Newington sprang into his mind's eye. He represented the spirit in which all the officers of the Association worked. Dr. Bond also should be specially named. Every member appreciated his services, and he took the opportunity of telling those who were included in the vote that the thanks were not merely formal: members were very grateful to them. They gave time, labour and thought and conscientiousness to the Association's work, and to those who took a minor part it was a great thing to have officers who carried out the work of the Association so ably, for its progress had gone on year by year, and this year there were no less than fifty new members. It was a great gratification to him to propose that vote to Professor Bevan-Lewis and the officers who had conducted the affairs of the Association during the past year. He wished also to include the Editors of the JOURNAL.

Dr. NICOLSON said it was a great pleasure to second the resolution which Dr. Clouston had so admirably proposed. It would be a work of supererogation to add anything to what Dr. Clouston had said; all agreed with him as to the great position occupied by Prof. Bevan-Lewis, not only in the Association, but in Great Britain and Ireland and in the scientific circles of the world. Concerning Dr. Hayes Newington, the backbone of the Association, it was needless to add a word. Dr. Bond had earned his spurs as General Secretary as well as any man ever did.

Carried by acclamation.

The PRESIDENT (Prof. BEVAN-LEWIS), in reply, said he supposed it was in accordance with the eternal fitness of things that one's obituary notice should be clothed in laudatory comment, and made fragrant with the sweetness of delicate sentiment and all too-flattering praise bestowed by one's colleagues, an incineration upon the altar of thanks, in other words that his apotheosis should be signalled by a great cloud of incense into which one's weary spirit disappeared for indefinite rest. However that might be, it was imperative to draw a distinct line of demarcation between the office of president, the highest which it was in the power of the Association to bestow, and the offices occupied by the permanent officials, who, as had already been well said, were the motive power, the heart, and arterial system, even also the nervous system, of the organisation. Those latter gentlemen had what was denied to the President—annual reincarnation. Their's was the perennial joy, blossoming continually afresh into official life, their's the constant labour of love, yet a labour which was not by any means insignificant, for the affairs of the Association needed the most careful watchfulness and discrimination. There was also needed the output of considerable energy and much self-denial and consummate tact. He could say that because in the arena of the committee meetings there was a shock of war between Caledonian, Saxon, and Celt, and if tact was not required there, he did not know what was required. But for the President it was ordained that his head be chopped off at short notice. Those perpetual executions had been going on in the history of the Association to its remote past, often involving very distinguished members of the specialty. But still they came, complacent, pleased, and apparently highly gratified at their annual rite of decapitation. He could only explain it on the grounds of the Association's kindly and considerate treatment of them during their year of office. No doubt it was a very healthy condition of things, and a salutary warning on the part of the Association that there would be no permanent official in the highest position which the Association could confer; that meant there should be no one who could degenerate into the spirit of the dictator. If there were any such spirit resident in the breasts of the ambitious younger members of the Association, he hoped they would take warning from his fate that day and from that of his numerous predecessors. Or, better still, let such an one be relegated to one of the hardest-worked committees, and then such an ambitious spirit would soon be torn into shreds by the united energies of the constituent mass. He hoped he might not be considered egotistic, but—and he said it largely on account of Dr. Clouston's remark—members and men generally differed very much from each other in their desire for office. He confessed that he had always felt an almost ineradicable, and, his friends told him, an almost insane shrinking from official positions. A very kind friend, who held an exalted position in the Association, approached



him with the words: "We have determined to raise the bushel from off your light." When that bushel was removed according to his desire, he, the speaker, feared that only a veritable rushlight was revealed. Yet each should be proud of his little rushlight for even the faintest scintillations emanating if they penetrated the gloom around claimed kinship with that eternal source of light, whose energies it was their most sacred privilege to conserve and to utilise. His short experience as President had taught him one lesson—a very important one—the enormous debt which he, as President, owed, and which every member of the Association owed, to the permanent officials of the organisation. Could one find a more ideal Chancellor of the Exchequer than the revered Treasurer, Dr. Hayes Newington? He was sure such could not be found, not even the speaker's fellow-countryman, Mr. Lloyd George. Eminent for his personal characteristics, charming in every way socially, possessed of a fund of humour, of a full acquaintance with men and manners, he had a most paternal solicitude for diffident presidents who were struggling into official life, and who looked upon their duties in despair. He had also placed the finances of the Association upon a most substantial basis, and he was sure Dr. Newington's withdrawal would be an irreparable loss to the whole body of members. Then, with regard to the General Secretary, all knew how multifarious were his duties, how manfully and bravely he carried them out, and how ready he was to meet every emergency of the kind. He dare not use, concerning Dr. Bond, the words which came first to his lips for fear of being regarded as prejudiced. They had worked shoulder to shoulder together in the West Riding Asylum years ago, and he had had joy at the continuous successes of his life, and at the way in which he had won his spurs in the highest spheres. His personal obligations as President were due to Dr. Bond for much assistance during his term of office. It was known, also, how the work of the Registrar had increased by leaps and bounds, yet he met it uncomplainingly and cheerfully, and he deserved all that had been said about him, the position being one of difficulty, and of even greater importance. Lastly, one came to that trinity in unity, the Editorial Staff of the Association, who had brought the JOURNAL into such a masterly position, whose quality was recognised not only in England, but also everywhere abroad. Looking at the length of the agenda for the present meetings, he did not know whether to sympathise with or to congratulate the Editors upon the amount of grist which had come into their mill. The Association should be congratulated on such veterans remaining on the Editorial Staff. It only remained for him to thank those present for himself and on behalf of his fellow officers for the very kindly sentiments expressed that day about them. He had now a very pleasing function to perform, namely, to vacate the Presidential Chair in favour of his successor. In that "Modern Athens" it would be idle on his part to speak of the qualities of heart and intellect of Dr. John Macpherson, whose laurels had been won in that centre and neighbourhood, and who was so well known to all, professionally and socially. And he must add, as his own personal tribute, that it was a source of intense gratification to him that during his official year he had been sandwiched between such an eminent predecessor as the well-known neurologist Dr. Charles Mercier, and such an ornament of the profession as Dr. John Macpherson. In placing the Presidential insignia around the neck of Dr. Macpherson he said he felt assured that no one would wear it with greater dignity or distinction. He wished the new President a prosperous year of office and God speed.

Dr. MACPHERSON then took the Chair.

The PRESIDENT (Dr. JOHN MACPHERSON) said that if anything could add to the satisfaction and gratification of taking the Chair, it was that he had been inducted into it by Professor Bevan-Lewis. Before commencing his address, he desired to mention that he had a few letters from honorary members abroad: Professor Benedikt, of Vienna, Dr. Toulouse, of Paris, Dr. Morel, of Belgium, Professor Kraepelin, of Munich, and also one from Dr. Needham, Commissioner in Lunacy in England. An extract from Dr. Needham's letter to the President ran: "It seems to me an excellent thing that there should from time to time be such evidence that the work, both of commissioners and superintendents of asylums, is in the same lines and is benefited by, and indeed demands, free co-operation by all. I write this, however, in bed at Leeds, where I have fallen ill. If I am able to attend you may rely upon my making every effort to do so." Of Professor Kraepelin's



letter a free translation ran: "My dear colleague, I thank you for your very kind invitation to your annual meetings. I regret extremely that, as I am in the middle of my session, it is impossible for me to leave here. Please convey to my English colleagues my personal greetings, and my hope that their assembly may be pleasant and successful."

#### PRESIDENT'S ADDRESS.

Dr. MACPHERSON then delivered an address entitled, "**Conceptions of Insanity and their Practical Results.**"

#### VOTE OF THANKS TO THE PRESIDENT.

Dr. CHARLES MERCIER said he felt he was singularly incompetent for the task which had fallen to him of voicing the thanks of the Association to the President for the address which members had received with so much gratitude and admiration. One reason why he was incompetent for the duty was that the President's address was not to be criticised; one must not differ from him. He found it very difficult to adopt that attitude—not an unusual circumstance in the Association. Secondly, if he had wished to differ from what the President had said, he would have found it difficult to do so. The address was founded upon the influence of altruism in the concept and the treatment of insanity. There was nothing more striking in modern civilisation than the amazing increase in the altruistic spirit in the minds of the western world in the last fifty or a hundred years. When one looked back to the ancient civilisation of Egypt and Rome, and to the less known civilisations of Mesopotamia, one found that in actual material wealth and in the amenities of life for those who were at the top of things they were but little inferior to the conditions obtaining to-day under western civilisation. One found there not only enormous wealth, with all the delights which wealth could bring to the rich, but evidences of the highest civilisation in a code of law of the most elaborate description, a code on which even western nations to-day founded their *corpora juris*. Yet it was well known that those civilisations were the foundation of slavery, that the amenities of life were only for the very few, while for the great multitude there was nothing but grinding poverty, grinding servitude, and unrewarded toil. When that state of civilisation was compared with ours it was seen that the difference was one between selfishness and altruism. When one looked upon all the advances which had been made in science and in progress—the invention of the application of steam to industry, of electricity and its various uses, of Listerism, of wireless telegraphy, and Darwinism—and compared them with the amazing alteration which had taken place in the attitude of the mind towards human suffering and towards death, one would find that the latter would weigh down all the former put together. Improvements in the arts and sciences had been going on for thousands of years, but the advances in altruism had been practically almost limited to the last fifty years. It was in the memory of men now living that ordeal by battle had lost its power; it was during the reign of Victoria that children at school were treated by methods of barbarism. It was well known in their own specialty with what barbarity the insane were treated. The same could be said of every department of life. Soldiers and sailors were treated with merciless severity; sometimes they died under the lash for mere trifling breaches of discipline. But such things could not happen now. He invited his hearers to think of the condition of the gaols in Howard's time, when men were cast into prison for the most trifling offences, when a man could be sentenced to death and hanged for stealing to the value of five shillings; and when he had to await his trial in a gaol in which the chances were ten to one that he caught typhoid fever, and when even the judges on the bench contracted gaol fever or typhoid fever from the felons who were tried before them. There was, only last night, a debate in the House of Commons on the conditions of prisoners, and one thing which everybody insisted upon was that prisoners should not be punished; that they should be treated not only with mercy, but with indulgence; that things should be made pleasant for them, and there should be no severity in their treatment. It was most instructive to compare that attitude with what obtained fifty or a

hundred years ago. The most marvellous change had been that which had come over humanity in its tenderness towards human suffering. Thus he was fully able to endorse what the President had said. When he saw that the address was to be on the concepts of insanity he thought it might be an instance such as that which was toasted at the Royal Society, when the President offered the following toast to his guests: "Here's to the last scientific discovery, and may it never be of any use to anybody." To clarify our concept of insanity was a task to which he (Dr. Mercier) had contributed his humble mite not long ago. And he could assure the President that if he set out to say what the concept of insanity ought to be, he was undertaking a Sisyphean task, and he was not likely to obtain general concurrence. But in one thing he was happy to agree with the President—as happy as he was likely to be in agreeing with anybody—namely, the preponderating importance which he assigned to the clinical side of the science of psychiatry. The pathologists and microscopists came round to the meetings with a haughty air, placed their preparations before the members, and demanded that they should be accepted. But the pathological laboratory was the downstairs—it was the area and the pathologist was the servant of the clinician. The clinician was the person most to be considered. The object of the specialty, as of all medicine, was to treat disease. Suffering patients came to the physician to be relieved of their sufferings. Their duty was to relieve them, and that relief could only be given by the clinical physician acting in his clinical capacity. The pathologist, with his amazing terms and theories, was merely the man to cook up the materials which the clinician supplied to him, and to supply the data from which the conclusions could be drawn. Therefore, let not the pathologist be too arrogant in contemplating the ignorance of the clinician. He much admired the President when he spoke of the immense advance which had been made from the entity of disease to a conception of the syndrome. As he understood the President, mania and melancholia were formerly considered to be diseases, but now they were known to be syndromes only. He was reminded in that connection of the discovery of the authorship of the *Iliad* and *Odyssey*, that they were not written by Homer, but by another gentleman of the same name who lived at about the same time. Once more he expressed his agreement with the President when he deprecated the use of mixed physical and psychical phrases. That he held to be the very abomination of desolation. Such were "psycho-motor," or "idio-motor," or some of the words given by the President, such as "stored impressions," "mental pictures," "centres for the association of ideas." They were neither physiology nor psychology; they were horrible hybrids; they neither deserved to be in heaven nor in the other place. Their place being a limbo, they should float between the two. They were not scientific, but were the negation of science. It was as bad as speaking of conduct as a branch of psychology. In his concepts of the nervous system as sensori-motor, he, Dr. Mercier, recognised the influence of his dear and revered master, Dr. Hughlings Jackson. It was only by keeping in mind the concept of the nervous system as a sensori-motor system, that it was an apparatus for the reception and storage and expenditure of force or motion, that one could avoid that terrible confusion of thought which would regard mental states as being stored up in the brain, as one eminent physiologist said, as bile was stored in the cells of the liver. He gathered the consensus of the meeting's thanks and laid them at the feet of the President for his most thoughtful and philosophical address.

Dr. ROBERT JONES said it had fallen to him to second the vote of thanks to the President. It had been a very great pleasure to him—and he knew he was voicing the feeling of others also—to hear that most suggestive address. That question of the relationship of mind to body had always been a most fascinating one to him, and the President had gone over all those views and brought their historic sequence to bear upon the progress of psychiatry. The address was as well delivered as it was charmingly phrased, and he was sure all would enjoy reading it in their arm-chairs. All that could be said of the address had been well said by Dr. Mercier, whose sentiments he cordially re-echoed.

Dr. FORD ROBERTSON then read a paper on "Infective Foci in General Paralysis and Tabes Dorsalis." It was discussed by Dr. MACKENZIE, Dr. DODS BROWN, Dr. PERCY SMITH, and Dr. WINIFRED MUIRHEAD.

Dr. CARSWELL gave a contribution on "The Treatment of Acute Mental Diseases of a Curable Type in Observation Wards." It was debated by Dr. SYDNEY

COUPLAND, Dr. SEYMOUR TUKE, Dr. BRISCOE, Dr. CLOUSTON, Dr. OSWALD, Dr. HELEN BOYLE, Dr. ROBERT JONES, Dr. YELLOWLEES, Dr. MACDOWELL, Dr. HAYES NEWINGTON, and the PRESIDENT. In replying, Dr. CARSWELL offered to show anybody over his hospital.

Dr. J. P. STURROCK read a contribution entitled, "On Certain Insane Conditions in the Criminal Class." Dr. DUNLOP expressed his agreement with the paper. Dr. PERCY SMITH, Dr. ROBERT JONES, and Dr. BRISCOE also discussed it.

## SECOND DAY.

The proceedings on Friday were resumed at the Royal College of Physicians, and were opened by a very interesting address by Dr. URQUHART on "Lunacy Administration in Scotland, with Special Reference to the Royal Asylums."

Dr. LEWIS C. BRUCE then read a paper on "The Deviation Complement in Connection with the Diseases known as Mania." Dr. MACKENZIE and Dr. FRASER discussed the paper, and Dr. YELLOWLEES expressed the meeting's appreciation of the painstaking work which Dr. Bruce had done.

Dr. IVY MCKENZIE read a paper on "The Arsenical Treatment of Protozoal Diseases." Dr. BRISCOE, Dr. CLOUSTON, Dr. LEWIS BRUCE, and Dr. MERCIER discussed the paper.

Dr. HUGH MORTON read a paper on "The Chemistry of the Cerebro-spinal Fluid."

The PRESIDENT announced that Dr. Morton had been awarded the Association's bronze medal and money prize for his essay on "Bio-chemical Examination of the Cerebro-spinal Fluid in Cases of Mental Disease"; and he took this opportunity of presenting him with the medal and cheque.

Dr. WINIFRED MUIRHEAD read a paper on "The Wassermann Reaction in the Blood and Cerebro-spinal Fluid, and the Examination of the Cerebro-spinal Fluid in General Paralysis and Other Forms of Insanity."

Dr. GILMOUR gave a contribution on "The Wassermann Reaction: a More Reliable Technique."

Dr. YELLOWLEES and Dr. PERCY SMITH spoke in terms of high eulogy of the work as evidenced by the papers.

## FRIDAY AFTERNOON.

In the early afternoon the party drove, by invitation of the Board of Managers of Morningside Royal Asylum and Dr. G. M. Robertson, to Craig House, where luncheon was served and presided over by Mr. James Adam, advocate, the Chairman of the Hospital. Speeches complimentary to the Association and to Dr. Robertson, the Medical Superintendent, and Dr. Clouston were delivered.

After luncheon Dr. G. M. ROBERTSON opened a discussion on "The Treatment of Mental Excitement in Asylums." It was participated in by the PRESIDENT, Dr. BRISCOE, Dr. CLOUSTON, Dr. DRAPES, Dr. STODDART, Dr. BEDFORD PIERCE, Dr. OSWALD, Dr. HAYES NEWINGTON, Dr. BOND, Dr. MACKENZIE (Inverness), and Dr. SEYMOUR TUKE.

Dr. LEONARD BAUGH read a paper on "Clinical Study of Anæsthesia, Mental Confusion, and Moods in Epilepsy, Confusional Insanity, and Hysteria."

## THANKS.

Dr. URQUHART, in the name of the meeting, tendered to Dr. Macpherson its hearty thanks for the manner in which he had controlled the debates and the meetings generally. At the same time, he proposed that the sincere gratitude of the Association should be expressed to the Managers of Morningside Asylum and to Dr. Robertson, the Superintendent, for their splendid hospitality. In Scotland, in the old days, there was a bad precedent that the meetings should not be held in asylums, but that was now, happily, dead, thanks largely to the initiative of Dr. Robertson. The Association had been going from asylum to asylum, and finding the practice of the utmost value.

The PRESIDENT expressed his cordial thanks for the vote. He had found his

duties very agreeable, and he had been kindly supported. He had had several communications from Dr. Turnbull, and it would be a pleasure to members to know that he was getting better, and hoped to be able to resume his duties.

Dr. G. H. SAVAGE proposed that a hearty vote of thanks be tendered to the authorities of the Royal College of Physicians in that city for their hospitality, and to the University and Conservative Clubs for their kindness in throwing their houses open to the members of the Association during their stay.

Dr. DRAPES seconded the resolution. He said if anything could add to the pleasure and dignity of that conference, it was meeting in such a city as Edinburgh, with its classic beauty, its scientific elegance, and its stately halls. The University and Conservative Clubs had also acted most generously, and it was, indeed, gratifying to come as strangers to a far city and find oneself among friends.

The resolutions were carried by acclamation.

A garden party and reception had been organised for the afternoon at Craig House, but as the weather was unpropitious the outdoor portion had to be abandoned, and some six hundred guests were accommodated in the large Hall.

#### SATURDAY.

On Saturday a considerable number of members and their friends, at the invitation of the District Board of Lunacy and Dr. Keay, journeyed to Bangour Village Asylum, in the large Recreation Hall of which a highly interesting account of the inception, opening, and development of the Institution was given by Dr. Keay.

The TREASURER said that, with the President's permission, he wished to add to what he had said on Thursday about Sir William Collins's question in the House to the Home Office. The question, he found from *The Times*, was asked, and elicited the information that the Home Secretary repudiated having any authority whatever in the matter of classification for pensions. This answer entirely disposed of any idea which might be conveyed by the County Councils Association's circular, that the interpretation of "care or charge" therein given had the approval of the representative of the Home Office at the conference with the English Commissioners. He again wished to say that the Association was most thankful to Sir William Collins for this and other services. In moving a hearty vote of thanks to Dr. Keay for his very clear description of the asylum, he said that he, personally, had looked forward keenly to coming to Bangour. Some years ago, when the plans for the Hellingly Asylum were being thought out, he had brought his colleagues as far as Edinburgh to hear from Sir John Sibbald and his colleagues a description of the advantages of this highest form of segregation, which was then much before the public in consequence of the reports that arrived of the Alt Scherbitz Asylum. They were much impressed, but on consideration felt that they could not go the whole way in adopting the scheme, but they had made some advance in splitting up accommodation, especially in regard to a hospital near the gates for recoverable cases. It was hinted to him at the time that one bad effect of segregation was the enhanced maintenance rate produced by the necessity for a larger staff. He rather doubted the truth of this, and now he was most interested, on analysing the figures supplied to them by Dr. Keay, to find that his rate was 10s. 3d. per week as against 10s. for the whole of the district asylums of Scotland. He felt bound to say that if, after inspection, he found that the patients were made more comfortable and otherwise benefited by segregation, the extra threepence per week was indeed well spent. (Applause.)

The visitors were entertained to lunch by the Board, and afterwards were conducted over the various villas and other buildings. An enjoyable and instructive day terminated with tea at Dr. and Mrs. Keay's house.

#### THE ANNUAL DINNER.

The members and guests dined together on Thursday evening at the Caledonian Station Hotel, under the presidency of Dr. John Macpherson, President of the Association. There were about one hundred present, and among the guests were



the Lord Provost of Edinburgh, the Hon. Lord Salvesen, Sir Thomas Fraser, Lord Guthrie, Rev. Dr. Fisher, Sir Halliday Croom, etc. During the evening the Edinburgh Quartette rendered, in admirable style, some capital pieces. The after-dinner speeches were of a very high order.

#### IRISH DIVISION.

The Summer Meeting of the Irish Division took place at the District Asylum, Belfast, by the kind invitation of Dr. W. Graham, on Thursday, July 7th, 1910, at 11.30 a.m., the members having previously visited the old institution, which will shortly be abandoned.

Dr. T. Drapes was voted to the chair, and there were also present Drs. W. Graham, P. O'Doherty, J. Patrick, S. Graham, G. R. Lawless, J. Mills, J. O'C. Donelan, and W. R. Dawson (Hon. Sec.).

Apologies were received from Drs. F. E. Rainsford, M. J. Nolan, E. O'Neill, J. J. Fitzgerald, C. E. Hetherington, and others.

The Minutes of the last Ordinary Meeting of the Division, and those of the Special Meeting, were read and signed.

The Hon. Secretary reported on various matters arising out of the Minutes, especially with reference to the resolutions passed at the Special Meeting relative to the appointment of Inspectors of Lunatics. To that sent to the Irish Members of Parliament four replies had been received, all favourable; and Mr. Arthur Lynch had asked a question on the subject in the House.

A letter from Mr. Winston Churchill was read, conveying the thanks of His Majesty the King and of Queen Alexandra for the resolution passed by the Division at its last meeting.

A letter from Dr. Hetherington was received, renewing the kind invitation to meet at Londonderry on some future occasion.

The following were balloted for, and declared unanimously elected ordinary members of the Association:

Ada English, M.B., B.Ch., B.A.O., R.U.I., Assistant Medical Officer, District Asylum, Ballinasloe; proposed by Drs. J. Mills, J. O'C. Donelan, and W. R. Dawson.

Edward Patrick Harnett Murphy, B.A., L.A.H. (Dublin), Assistant Medical Officer, Stewart Institution, Palmerston; proposed by Drs. F. E. Rainsford, J. O'C. Donelan, and W. R. Dawson.

It was decided to hold the Autumn Meeting of the Division, fixed for Saturday, November 5th, 1910, at the Royal College of Physicians, Dublin.

The question of how best to mark appreciation of the work of Sir George P. O'Farrell in the interests of the insane in Ireland during his tenure of the office of Inspector of Lunatics was then discussed, and ultimately it was decided to appoint a committee, consisting of Drs. Drapes, Hetherington, W. Graham, Dawson, Nolan, Ellison, James J. Fitzgerald, O'Neill, O'Doherty, Mills, and Lawless, with power to add to their number, to co-operate with other representatives of the staff of the Irish Asylums in arranging for a suitable presentation, it being felt that the movement ought not to be restricted to the medical officers. In the meantime it was decided to send to Sir George O'Farrell an expression of regret at his retirement and appreciation of his services.

Dr. Drapes then read a paper entitled "A Case—and A Confession." A male patient had been sent in from the "idiot ward" of the workhouse with the history of a suicidal attempt, and also that he complained of pain which, owing to the absence of signs to account for it, was judged to be hallucinatory. The pain was in the epigastrium, had been complained of off and on for about two years, and in the asylum was judged for certain reasons to be at least partly mental. Morphine was, however, almost the only thing that gave relief. Other symptoms supervened later, and the case eventually turned out to be one of locomotor ataxy with gastric crises.

Dr. Donelan quoted two cases in his experience in which pain, supposed to be hallucinatory, proved to be due to tabes.

Dr. Graham thought that the abdominal pains of tabes might be explained by

hyperæsthesia of the abdomen, accompanying diminished sensation in the extremities.

Drs. Mills and Dawson also spoke, and Dr. Drapes having replied, the meeting terminated.

A brake then conveyed the members to the new asylum at Purdysburn House, where they were entertained at lunch by Dr. Graham, who afterwards conducted them over the villas of the new institution already occupied, and also the buildings in course of erection, finishing with the farm-steadings.

After tea at Purdysburn House a pleasant and instructive day was concluded with a hearty vote of thanks to Dr. Graham.

### RETIREMENT OF SIR GEORGE O'FARRELL.

#### TRIBUTE FROM OLD COLLEAGUES AND FELLOW-WORKERS.

The retirement of Sir George O'Farrell from the position of His Majesty's Inspector of Lunatic Asylums, and his impending departure from Ireland, brought together a distinguished assemblage of his friends and admirers in the Council Chamber of Dublin Castle on Tuesday, 12th July, 1910, to make him a presentation as a token of the esteem in which he was held during his official career.

The meeting was presided over by the Right Hon. The Lord Chancellor of Ireland, Lord Justice General.

The following were present or were represented :

The Right Hon. Lord Ashbourne, The Right Hon. The Attorney General, Percy Bernard, D.L., Ralph H. Byrne, Sir C. B. Ball, M.D., E. Burke, Commissioner, Local Government Board, Sir J. G. Barton, C.B., Chief Commissioner of Valuation, The Hon. Mr. Justice Barton, E. M. Courtenay, M.B., The Right Hon. Sir Patrick Coll, K.C.B., Sir F. J. Cullinan, C.B., Sir H. F. Considine, C.B., C.V.O., J. M. Colles, Colonel Courtenay, C.B., D.L., W. P. Connolly, Thomas Considine, F.R.C.S., Sir Francis Cruise, M.D., D.L., The Right Hon. J. H. Campbell, K.C., M.P., The Right Hon. Sir J. B. Dougherty, K.C.B., K.C.V.O., Blacker Douglas, D.L., Henry Doran, Commissioner, Congested Districts Board, Hon. J. French, R.M., Sir John Fagan, F.R.C.S., Sir John Franks, C.B., Gerald Fitz-Gibbon, K.C., Wilfred Fitz-Gerald, J. S. Gibbon, C.B., Chairman, General Prisons Board, L. J. Hewby, Treasury Remembrancer, Sir George Holmes, K.C.V.O., Philip Hanson, C.V.O., William Hone, Lady Holmes, The Right Hon. Sir David Harrel, K.C.B., W. V. Harrel, M.V.O., Lord Killanin, Malachy Kelly, Chief Crown Solicitor, James Little, M.D., Physician to H.M. The King in Ireland, Christopher Latouche, D.L., Mr. Commissioner Lynch, Sir John Lentaigne, F.R.C.S., J. P. Lynch, The Right Hon. Mr. Justice Madden, Vice-Chancellor, University of Dublin, J. Mulhall, Vice-Chairman, General Prisons Board, The Right Hon. Sir F. Matheson, Sir F. X. F. McCabe, The MacDermott, D.L., Sir George Morris, K.C.B., W. L. Micks, Commissioner, Congested Districts Board, The Master of the Rolls, Sir C. J. Nixon, Bart., M.D., David Nicolson, C.B., M.D., Robert F. Olphert, R.M., E. O'Farrell, Assistant Under Secretary, J. R. O'Brien, Secretary, Congested Districts Board, The Solicitor General, F. C. Pilkington, D.L., The Right Hon. Sir H. A. Robinson, K.C.B., Sir Andrew Reed, K.C.B., The Right Hon. The Lord Rathmore, James Smith, Ernest G. Swifte, Metropolitan Police Magistrate, T. S. Stafford, C.B., D.L., J. J. Taylor, C.B., Sir Henry Thynne, C.B., His Honor Judge Wakely, Robert Woods, M.D., President, Royal College of Surgeons, Sir Stewart Woodhouse, Lawrence Waldron, Benjamin Williamson, Vice-Provost, T.C.D.

The presentation consisted of a handsome 18th century half-oval Sheraton satinwood table, a silver inkstand, candlesticks, etc.

At the opening of the proceedings, the Secretary (Sir Stewart Woodhouse) intimated that no less than seventy letters had been received by the Committee from supporters of the testimonial. Of these, the letters of Sir F. Cruise, Sir A. Reed, and Mr. Commissioner Lynch were read.

The LORD CHANCELLOR, in making the presentation, said :—Friends, I am very glad personally to be the medium of conveying to our old and true friend, Sir George O'Farrell, this small tribute of regard which we present to him to-day. It

is but a small tribute, but I feel that Sir George will value it most from the good wishes and goodwill which accompany it. (Applause.)

Sir George O'Farrell has been for many years one of the heads of the Asylum Department which he administered, and I think anyone who can go back as far as I can will be struck by the differences that exist now as regards the treatment and care of lunatics from what obtained then. I think everyone will see these great differences, and it is not too much to say that this improvement in the care and treatment of lunatics is largely due to the efforts of Sir George O'Farrell. (Applause.) We see it in the way they are housed, in the efforts that are made for the amelioration of their unhappy condition mentally, and the efforts towards their cure, and we see it in the provision that is made for their outdoor employment and health, which contributes so much to their happiness (if we may apply such a word to these poor people). All these have largely contributed, in my opinion, to an improvement in their mental and physical health; and now, I think, the condition of our lunatic poor contrasts favourably with that in any other country. For all this, we and the public owe much to Sir George O'Farrell, and I must not omit, when I speak of him, the able colleague who was associated with him during that time. (Applause.) But we are speaking of him not only as an able administrator, and an able fellow-worker, but also as an old friend. We know him as a genial companion and as an esteemed and valued friend, and we all now wish him long life, and health, and happiness in the retirement which he has so well earned, and into which our good wishes will follow him.

I have great pleasure in handing over to him now these mementoes of our great regard, with the good wishes from myself, and the good wishes from you, which you have given me the privilege of expressing. (Applause.)

Sir GEORGE O'FARRELL, in reply, said:—My Lord Chancellor and Gentlemen, we read, on authority that cannot be questioned, that "out of the fulness of the heart the mouth speaketh." I can only say, in contravention of that text, that the fulness of my gratitude, which comes from my heart, has rendered me quite incapable of adequately expressing my obligation for your gracious presence here to-day, and for your beautiful gifts to me. If this presentation were made solely on the grounds of personal merit, I should be at a loss to understand why I should receive such a compliment from you, but I infer from the inscription, and from your lordship's kind remarks, that you are met to honour me as much in an official as in my private capacity, and to acknowledge the efforts which my colleague and myself have made during the past twenty years to raise the standard of the care and treatment of the insane.

I may say at once that the credit for the advances which have been made are due rather to Dr. Courtenay than to me. He is one of the most unselfish of men, and it would be no exaggeration to say that he has spent himself in the public service. (Applause.) It will be always a very gratifying reflection to me, and to my colleague, on our retirement, that we are leaving the lunatic poor in a better condition than we found them. They are better housed, fed, and clothed, and the shackles of mechanical restraint have been entirely removed, and in nearly every public asylum in Ireland, sufficient land has been acquired for their recreation and employment. The State Asylum at Dundrum, which is intended for the reception of criminal lunatics, and which twenty years ago was in a state of disorganisation which threatened a public scandal, is now—under the management of Dr. George Revington—highly efficient for its purpose. Lastly, we found that the private and charitable institutions for the insane, with some exceptions, were so bad that we were obliged to take steps to have them closed by order of your lordship's predecessor. In dealing with these, it was our good fortune to be associated with the gentleman who exercises, under your authority and direction, the great jurisdiction committed to you, under the Sovereign's sign manual, over the property and persons of lunatics and minors, and we know from our own personal observation that Dr. Colles' administration of his office has brought untold comforts and blessings to the large class of mentally afflicted who are under the control of your lordship's Court.

Gentlemen, it is hard to say farewell, and especially hard to be separated from old friends such as you have been to me—from such a man as Sir George Morris, with whom I have maintained, for over twenty years, a friendship and an intimacy that has known neither interruption nor alloy.

I am indeed reluctant to leave Ireland. I am like the prisoner in Prior's poem, who

"Often took leave, but was loth to depart."

I need say little more. Everything must come to an end. Practically my official career ends to-day in this room, with the seal and sanction of your lordship's approval. But never, until my last breath leaves me, shall I forget your kindness or fail to recall the kindly faces which I now see around me. (Applause.)

Sir GEORGE MORRIS proposed a vote of thanks to the Lord Chancellor for presiding. He said the Lord Chancellor had presided on this, as on other occasions, in the kindest spirit, and had succeeded in conveying to Sir George O'Farrell the unanimous feeling they all had of his departure from amongst them.

The LORD CHANCELLOR, in reply, said he did not think he deserved any thanks for coming to see Sir George O'Farrell, and to say a last word to him as an old friend. It was rather a melancholy task, and he hoped he would not have to undertake a similar one.

#### THE LIBRARY OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The Library is open daily for reading, and for the purpose of borrowing books. Books may also be borrowed by post, provided that at the time of application threepence in stamps is forwarded to defray the cost of postage. Arrangements have been made with Messrs. Lewis to enable the Association to obtain books from the lending library belonging to that firm, should any desired book not be in the Association's Library.

A special grant has recently been obtained from the Association for the purpose of binding the large number of paper volumes now in the Library. Many of these have considerable historical and scientific interest.

At the commencement of 1911 the Library Committee propose to put the following scheme into operation. It is designed to meet the requirements of those members who wish to have an opportunity of regularly perusing the current Journals:

- (1) The Library will subscribe to the following five Journals:  
*The Journal of Abnormal Psychology.*  
*The Journal of Nervous and Mental Diseases.*  
*The American Journal of Insanity.*  
*Journal de Psychologie Normale et Pathologique.*  
*Zeitschrift für die gesamte Neurologie und Psychiatrie.*
- (2) Any member of the Association who so desires may put down his name for one or more Journals.
- (3) When the current number of a Journal arrives at the Library it will be immediately posted to the member whose name is first on the list. He will be at liberty to keep the Journal for a period not exceeding a fortnight. He will then post it to the member whose name is second on the list. And so on, until the Journal reaches the member whose name is last on the list. At the conclusion of his fortnight the latter will post the Journal back to the Library, where it will be preserved and subsequently bound.
- (4) Members' names will be entered on the list for each Journal in the order in which they shall have applied to the Secretaries.
- (5) Members wishing to avail themselves of this scheme are requested to send their names to the undersigned at Long-Grove Asylum, Epsom—not later than November 30th, 1910. They should at the same time state which Journals they desire to receive.

H. DEVINE, } *Hon. Secretaries,*  
 B. HART, } *Library Committee.*



## NOTICES BY THE REGISTRAR.

The next examination for the Nursing Certificate will be held on November 7th, 1910.

The new regulations do not come into force until 1911.

In May, 1911, there will be both a Preliminary and a Final Examination.

## NOTICES OF MEETINGS.

*Quarterly Meeting.*—The next meeting will be held at 11, Chandos Street, Cavendish Square, London, W., on Tuesday, November 15th, 1910.

*South-Western Division.*—The Autumn Meeting will be held on Friday, October 28th, 1910.

*Northern and Midland Division.*—The Autumn Meeting will be held, by the courtesy of Dr. Hopkins, at the York City Asylum, Fulford, on Thursday, October 20th, 1910.

*Scottish Division.*—The Autumn Meeting will be held on Friday, November 18th, 1910.

*Irish Division.*—The Autumn Meeting will be held on Saturday, November 5th, 1910.

## APPOINTMENTS.

Lowry, James Arthur, M.D., R.U.I., Medical Superintendent, Surrey County Lunatic Asylum, Brookwood, *vice* Dr. J. E. Barton, resigned.

Carre, Henry, L.R.C.P.&S.Irel., Medical Superintendent to the Glasgow District Asylum, Woodilee, Lenzie, Glasgow.

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